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DISPATCH OF "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE *possesses the necessary permit and machinery for such dispatch, and any reader desirous of arranging for copies to be delivered to an agent or correspondent overseas should place the order with us together with the necessary delivery instructions.*

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Limitation of Dividends

THE Chancellor of the Exchequer has resolved doubts in the City as to whether the proposed limitation of dividends is to apply to railway companies. Sir John Simon has declared that the railways will fall under the rule imposing a maximum rate of 4 per cent. a year on ordinary stocks. Stockholders will feel they are treated harshly, for the Government's own plan which was the basis of the financial agreement for control held promise of better things. Great Western ordinary stockholders will be the first to be affected. They should receive 4·6 per cent. when the pool of earnings amounts to £44,600,000, and presumably earnings are now moving towards that point; instead they will be limited to 4 per cent., which was paid for 1937 and happens to coincide with the proposed maximum for companies which have not established a better standard in recent years. Some complication may arise, too, in the matter of dealing with split issues of ordinary stock, such as the preferred and deferred stocks of the L.N.E.R. and of the Southern. Certain maximum earnings on railway stocks were established under the financial agreement. These, which in the cases of the L.M.S.R. and G.W.R. amounted to 8·1 per cent., are now to be reduced to not more than 4 per cent.

* * * *

Mr. Roger T. Smith

Few kindlier or more likeable men existed among the older school of electric traction engineers than Mr. Roger T. Smith, who died on April 28. His earlier professional years were spent in civil engineering and electricity generation and distribution, and his connection with traction work began in 1898, when he joined the staff of Sir A. B. W. Kennedy, who at that time was electrical consultant to the Waterloo & City Railway. Before succeeding Mr. Spagnoletti as Electrical Engineer of the Great Western Railway in 1905, Mr. Smith was in charge, on behalf of Sir Alexander Kennedy, of the electrification of the Hammersmith & City joint line (Hammersmith to Westbourne Park), and the conversion of the continuing mile of G.W.R. line—from Westbourne Park to Bishop's Road. The scheme also included the erection of a power station at Park Royal which supplied current to Paddington station as well as to the traction substations. The Wood Lane to Ealing section of the G.W.R., forming an extension of the Central London tube, was electrified under Mr. Smith's direction in 1920. After his retirement from the G.W.R. in 1924, Mr. Smith was associated with the Highfield brothers in the consulting firm of Highfield and Roger Smith, and in conjunction with Sir Felix Pole he reported on the Sudan Government Railways. Mr. Smith contributed an article to the first issue of our *Electric Traction Supplement* on "The present position of electric railway traction."

* * * *

Mr. J. S. Harper

Many improvements have taken place in the Hull area, L.N.E.R., since Mr. J. S. Harper was appointed District Superintendent in 1927. When he retires on May 18 he will be able to look back on the extension of Hull's fish dock, the layout of a mechanical shunting yard, and resignalling at Paragon station involving the largest route interlocking system in the world, as a few of the outstanding developments with which he has been closely associated. Mr. Harper has served the railway since 1897, when he became a junior clerk at Northallerton. His allegiance to the line was traditional, for his father, the late Mr. J. B. Harper, was a former Assistant General Superintendent of the North Eastern Railway. Apart from

XUM

four years in the Royal Engineers during the last war, when he became Traffic Manager of the Royal Arsenal Railway at Woolwich, the whole of Mr. Harper's career has been spent in the North-Eastern area of the L.N.E.R., and his retirement will remove from the daily conduct of local railway affairs a personality which will be greatly missed both by his colleagues and by travellers and traders in the district.

* * * *

Overseas Railway Traffics

On Argentine railways generally the traffic returns for the 42nd and 43rd weeks of the financial year have been in a downward direction, even on the Buenos Ayres Great Southern and the Buenos Ayres Western Railways which in that period are down respectively 517,000 and 186,000 pesos. In the corresponding weeks of 1939 these two companies showed respective increases of £29,963 and £33,126 over 1938, and in the aggregate the Western was only £1,303 behind. Brazilian railway traffics in the 15th and 16th weeks of 1940 have shown an improvement in sterling.

	No. of Week	Weekly Traffics	Inc. or Decrease	Aggregate Traffic	Inc. or Decrease
Buenos Ayres & Pacific* ...	43rd	1,555	— 220	58,794	— 1,856
Buenos Ayres Great Southern*	43rd	2,213	— 397	100,438	+ 652
Buenos Ayres Western* ...	43rd	934	— 108	33,447	+ 2,006
Central Argentine*	43rd	1,660	— 469	74,643	— 6,504
		£	£	£	£
Canadian Pacific	16th	519,600	+ 62,600	8,742,400	+ 1,430,000
Bombay, Baroda & Central India	3rd	289,650	+ 22,500	560,700	+ 35,400

* Traffic returns in thousands of pesos.

Antofagasta traffics in the first 16 weeks of the present year have advanced by £92,010. For the same period in 1939 they were down £58,190.

* * * *

Train Fares by Hire Purchase

In the United States the hire-purchase system has been developed to such a degree that in certain ranges of goods it is exceptional to make a cash sale. In no other country has the habit grown to the same extent of taking delivery of articles against a small initial payment and of then paying for them over a period of months or even years, although there were indications at one time that this country might run the United States fairly close in this if no check was placed on the indiscriminate granting of credit. In the transport sphere it has long been known that large proportions of motorcars and commercial vehicles are bought on the instalment plan. Two new developments are now reported in this method of acquisition. Ships sailing from the U.S.A. on pleasure cruises to Bermuda, the Caribbean, or elsewhere now permit the passenger to embark after he has made a small payment on account. The remainder he pays the company over a period of months after he has returned and when the cruise is no more than—we hope—a pleasant memory. The same system is also being applied to railway travel. Unless it is confined to infrequent occasions such as annual holiday travel, there might be difficulty in keeping a check on the mounting debt as the habit of travel grew with the lack of necessity to put down the whole cost in advance.

* * * *

Railway Ancillary Services in Holland

It is noteworthy that many services which railways in other countries consider as coming within their own spheres, have in Holland always been left to others. For instance, neither inland nor cross-Channel water transport has ever been under the immediate control of the railways in Holland, a separate company operating the Flushing—Parkeston Quay services, and even the passenger ferry service across the former Zuiderzee—now known as the Yssel-Meer—has always been operated by a private company. Nor has any attempt ever been made to control any of the numerous inland canal and river services. A private coal line in the mining district of South Limburg is under the management of the mines and is operated to a junction with a river and canals serving the centre and the north of the country. The railway company does not run the railway hotels and restaurant car services, nor even the station refreshment rooms. It is argued that all such services, though contributing towards the development possibilities of passenger and goods traffic on the railways, can never be handled by them as efficiently as by private companies or contractors, specialising in those particular lines. This would probably be true if these ancillary services could be considered independently of railway transport, but in point of fact it must be admitted that in some cases, particularly the restaurant car and refreshment rooms services, the facilities are decidedly inferior to the railway-operated services in the British Isles and many overseas countries, and the prices charged to passengers are in most cases much higher.

* * * *

840-ton Passenger Trains

It is safe to say that at no previous time in railway history have such passenger train loadings been handled on British metals as those referred to on p. 652. Formations of 24, 25, and 26 coaches, with tare weights of 750 to 762 tons, and gross weights of 825 to 840 tons or more, meant that the engines concerned were hauling (including their tenders) from $8\frac{1}{2}$ to $9\frac{1}{2}$ times their own weight. In particular it is a matter for remark that one of the "A1" Gresley Pacifics of the L.N.E.R.—a design now 18 years old—was able to work a gross load of about 830 tons from Peterborough to King's Cross practically to time at an average speed of 47·8 m.p.h., a task very far in excess of anything that could have been contemplated when the type was first produced. The disadvantage of these enormous formations, however, is that some of the extreme examples are double the length of the station platforms at which the trains stop, and this inevitably means drawing up twice, obstruction of station working while it is in progress, and loss of time. As a result of the way in which L.N.E.R. expresses are now grouped, in order to free the main line to the maximum possible degree for freight, the loss of time, with two or three trains thus drawing up twice in close succession, becomes cumulative, as the details on p. 652 make evident. Some of the delay might be avoided, now that several of the principal L.N.E.R. day expresses are duplicated, if either the relief or the main train omitted certain of the intermediate stops. Another assistance might be to label coaches at one or other extreme end of very long trains in such a way that they would not be available to passengers for intermediate stations, and so where possible to avoid drawing up twice.

* * * *

The New Cross-Channel Steamer "Invicta"

The recent announcement that the new Southern Railway cross-Channel packet has been named *Invicta* indicates the perpetuation of a long tradition. The first railway-owned *Invicta* was built for the London, Chatham & Dover fleet in 1882, by the Thames Ironworks at Blackwall, and was one of the early steel-hull packets. Gross tonnage was 1,197 and paddle engines of 4,000 i.h.p. gave 18 knots on service. In 1896 she was chartered to the Northern Railway of France, and for the next two years maintained the French side of the service, but was withdrawn in 1898 and broken up in the next year. The second *Invicta* was built by Denny, of Dumbarton, in 1905, and was the first step in the improvement on the design of the pioneer turbine packet *The Queen*. Of 1,680 tons gross, speed was increased to 22 knots, and

on trial nearly 23 knots was achieved. She was a great favourite on the service, carried royal passengers on more than one occasion, and when war broke out in 1914 was left to the railway for some time for the skeleton service between Dover and Dunkerque. Later the vessel carried troops and refugees while so many of the newer consorts were in the Navy. In 1922 she was withdrawn and advertised for sale, but soon afterwards her owners decided to retain her as a reserve ship, although in the next summer the ship was transferred to the French flag, like her predecessor. In 1927 she carried the French President when he visited London. Not until 1932 was the vessel sold to breakers in France and replaced by one of the new Cote steamers.

* * * *

American Sleeping Cars

It has been a matter of surprise to British travellers on the North American Continent that American Pullman passengers have for so long past endured the relative discomforts of their convertible sleeping cars on night journeys. True, the beds have been comfortable enough when their occupants have at length succeeded in ensconcing themselves in them, but the acrobatic feats necessary before the retiring passenger could succeed in divesting himself or herself of clothing while actually inside an upper or lower berth, with no firmer guarantee of privacy than a curtain, and the even greater exertions of dressing in such conditions, plus the congestion of common washrooms at the end of the sleeping cars, have at length compelled the introduction of improved night accommodation in the U.S.A. This takes several forms. There are sleeping cars of a modified open type in which the passenger hires a complete " section "; this has no upper berth, and the bed can be folded out of the way to allow dressing space. In the first eight months of 1939 roughly half a million sleeper reservations of this description were made in the U.S.A. Also 91 " roomette " cars are now in service, divided into 1,370 separate sleeping compartments, and the demand is increasing for " suites," in which two or three passengers share a couple of communicating rooms, instead of the " drawing rooms " which at considerable extra cost offer the only complete privacy on the older type of sleeping car. At a recent conference of the American Association of Passenger Traffic Officers it was confidently foreshadowed, indeed, that the open section sleeper is now " on the way out."

* * * *

The Leisured Classes

Travelling on a G.W.R. express the other day, we noticed that an official patrolling the corridor with an armful of the company's " Holiday Haunts " publication made no attempt to offer his wares in a compartment filled with soldiers, sailors, and airmen. This happened to be on the very day that large numbers of young men were required to register for military service, and the morning after an anonymous speaker on the radio had been at pains to explain how a career with the Forces is the gateway to a fuller life. Yet here was a pointed implication that the man in uniform has no time for holidays. Every student of the daily press in the days immediately after conscription was introduced will know this to be untrue, recalling how the ample leisure and abundant facilities for recreation offered by service with the colours were advertised to an extent which led some foreign countries to underestimate the military value of our fighting men. Our seller of guides cannot have been a close reader of the papers; or did he, on the other hand, suppose that every soldier today carries a free copy of " Holiday Haunts," " The Holiday Handbook," " Holidays by L.M.S.," and " Hints for Holidays " in his knapsack ?

The Problem of Road and Rail Transport

AT the present time it is difficult to believe that less than twelve months ago the demand of the railway companies for a " square deal " was occupying public attention and that the road-rail controversy had blazed up again. So much has happened since last summer, and as railway managements, particularly, have been working at full pressure on the war effort, it is not surprising that the discussions over the " square deal " have passed at any rate temporarily into the background.

Most members of the public have probably now forgotten what it was all about; indeed, we noticed that last February the settlement of the financial arrangements between the railways and the Government was announced as the railways' " square deal." And it is common to see criticism in the press of L.P.T.B. train services linked with the main line railways' claim for freedom in fixing freight charges ! We welcome all the more, therefore, the book entitled " The Road and Rail Transport Problem " which Brig.-General Sir Osborne Mance has now published. Elsewhere in this issue the volume is reviewed in some detail. General Mance reminds us that the problem is far from being settled; it has merely been shelved for the time being. No doubt—as recently pointed out by Sir Ronald Matthews, to whose observations we drew attention in our issue of April 12—the effects of the war will have a profound influence on the transport industry as a whole.

No one can foresee at this date what developments are likely when the war ends. It has probably been a good thing that the transport industry has had a breathing space to sit back and look at the problem more objectively. Unfortunately, the war effort has proved so exacting that sitting back has been out of the question, but it would be a pity if somehow in this period attention could not be directed to post-war problems. Ideally, there ought to be a section at the Ministry of Transport collaborating with the transport interests in the working out of a scheme, including the necessary legislation, that could be put into force as soon as normal times return, assuming normal to mean a chronic tendency to supply in excess of demand. Practically all that General Mance has to say is relevant to such a condition—his criticisms no less than his factual survey; and transport people will do well to study his volume, if for nothing more than to refresh their memories.

We do not say that we are able to agree with all that General Mance has to say. For example, on pages 18 and 19 he makes three statements: (1) The existing railway classification merely gives legal sanction to a natural development, and the lower rates, therefore, are not the result of Government intervention; (2) the rates for low class traffic are as high as the traffic will bear or as competition will allow; (3) increases in the lower rates would be possible to a greater extent than previously realised. Possibly General Mance is theorising, but it is difficult to see on the basis of (3) how (2) and (1) can exist. The railway companies' claim for a " square deal " (before modification) implied, among other things, putting (3) to the test, but subsequently it had to be modified to preserve, in effect, the classification. In other words, the railways could have obtained receipts from higher charges on low class traffic, but their claim for freedom to do so (and thus secure equality with their competitors) would have been rejected. And yet in proposition (1) General Mance suggests that there is nothing compulsory about the classification and that it would be required in practice if it were not required by law. This sort of discussion, however, is fundamental to transport economics and it illustrates the value of the volume. The author has perperformed a service to transport by putting his views on record.

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Reactions to Higher Railway Charges

THE first step to implement the financial agreement between the railways and the Government, by raising charges so as to make good higher costs arising from the war, has proved how right were the railways in their reluctance to accept the principles underlying the arrangement. We have on several occasions quoted the chairmen at the annual meetings of the main-line companies, where they pointed to the practical and political objections inherent in the agreement which the Government had forced on them. Lord Horne at the Great Western Railway annual meeting in February, in his very clear account of the railway companies' negotiations with the Government, said: "It appeared to the companies to be wrong in principle that any part of the compensation payable to the companies should be dependent on net earnings when the control of expenditure was taken out of their hands." The railway spokesmen in the negotiations were well aware both of the difficulties and of the consequences of raising charges, but the Government advocates insisted on linking charges to costs. This they have done and the outcry which has greeted the first—for it would be over-optimistic to hope that there will not have to be others—adjustment of charges to costs shows that the railways were better able to judge public opinion than the Government. One point in the financial agreement which is now being seized on by critics of the scheme is that the adjustment of charges relates only to costs, although gross receipts may rise more speedily than expenditure. Misgivings on this point have been expressed in quarters which do not lean unduly to the Left. The fact that in the 32 weeks of the war railway gross freight receipts rose £13,750,000 or 20 per cent. compared with the similar period twelve months earlier, and passenger receipts declined £4,000,000 or 7 per cent., leaving the railways £9,750,000, or 8½ per cent. up on these two items, has added to the dislike which has been freely expressed, for the higher tariff.

There can be no doubt that Sir George Courthope performed an important duty when, during the debate in the House of Commons on the higher charges, he corrected a false impression which is indeed very widespread. This is that the demand for higher charges comes from the railways. It cannot be sufficiently emphasised that it is not the railway companies but the Railway Executive Committee as the agent of the Minister of Transport which is responsible for the formulation of proposals to adjust charges to cover increased costs in accordance with the terms of the agreement between the railway companies and the Government. It is unfortunate that this understanding of the position is not as general as could be desired, for there is a disposition to overlook the change which has been wrought in the control of the railways, and with it the responsibility for acts or omissions which may have an unfavourable public reaction. In THE RAILWAY GAZETTE of April 5 we pointed out some of the factors which enter into the desirability of a clear understanding of the functions of the Railway Executive Committee. This matter is the subject of negotiations with the Government and the latest developments in the question of charges strengthen the need for definition. The cumulative effect of numerous irritations—individually small maybe—might have serious repercussions on the railways when the question arises of relinquishing the control now exercised. After the war the railways may very well need all the support they can obtain from the public. It is therefore all the more vital that the true inwardness of the present position should be understood and, should the question of blame arise at some time in the future, that it should be fairly apportioned.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Increased Railway Charges

Cambridge, April 28

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The report of the debate in the House of Commons on the question of the increased rail charges, which appeared in last week's issue of THE RAILWAY GAZETTE, gave a very full account of Captain Euan Wallace's and Sir George Courthope's replies to Mr. Ridley, but entirely ignored the criticisms of the agreement made by Mr. Herbert Morrison, Sir Reginald Clarry and Mr. Wilmot.

Mr. Morrison suggested that the agreement allowed increased charges corresponding with increased costs of working *irrespective of increased traffic receipts*, and added "if that is so, the thing is a fraud and a scandal." Mr. Morrison's interpretation of the agreement was not denied by Captain Euan Wallace or Mr. Bernays and is therefore presumably the correct interpretation.

In the editorial of THE RAILWAY GAZETTE of November 17, 1939, you condemned claims for increased wages necessitated by the Government's failure to control prices at the beginning of the war, as contributing to the "vicious spiral." You do not, however, mention the vicious spiral in connection with increased rail charges! J. M. K.

[Our report of the debate in Parliament was necessarily curtailed for reasons of space. We gave the opening speech, the Minister's reply, and also the speech of Sir George Courthope, who spoke as Chairman of the Committee of Railway Directors. Further extracts from the general debate are given this week. The financial agreement between the railways and the Government provides that charges shall be adjusted to meet variations in working costs and certain other conditions arising from the war. The question of increased traffic receipts is not dealt with by the agreement, of which, as has been repeatedly emphasised in THE RAILWAY GAZETTE—on the last occasion in our issue of April 26 when referring to the rise in charges—the provisions now criticised were neither sought by the railways nor welcomed by them. The agreement as a whole was accepted by the companies after prolonged negotiation had failed to move the Government from its main lines of policy. The "vicious spiral" was not set going by the railways; the increase in charges is merely one of its effects—nor, incidentally, did we express any condemnation of the railwaymen's claim. We merely recorded that the ascent of the "vicious spiral" had begun. Anyhow present or future increased railway charges cannot now enable railway ordinary dividends to "spirate" beyond 4 per cent.—ED., *R.G.*]

The Government and the Railways

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Thanks for your courtesy in printing my letter in THE RAILWAY GAZETTE of April 12.

You make two points in reply, but with all respect I cannot accept either as in any way answering the contention I submitted.

(1) You state the revenue position has been strengthened in the future as the railways have now a guaranteed income, and quote Sir Ronald Matthews as supporting this view. For the benefit of your readers would you be good enough to quote the comparable figures to the forty millions showing what the railways have actually earned since 1923. I think these will show that the Government has in fact driven a very hard bargain.

(2) You also assert that the statutory sanction for Standard Revenue "not only remains but is re-inforced." This is surely a new connotation of the word "re-inforced." How can a sanction to earn fifty-one millions be "re-inforced" by making it a condition that in order to achieve fifty-one the railways must earn sixty-eight and a half millions?

The plain facts are:—

(i) The Government has not been unduly concerned (on their own initiative) about the falling revenues of the railways.

(ii) The shareholders none the less have sacrificed dividends in order to maintain efficiency of operation and a high standard of maintenance and renewal at current prices.

(iii) A war occurs and the railways, at a moment's notice, become an integral and essential part of the National effort.

(iv) The Government takes control of an up-to-date efficient machine and gives as a "guarantee" a revenue, which the figures you may be kind enough to quote show to be on a definitely niggardly basis.

Can you give a categorical denial to the foregoing ?

Yours faithfully,

REALIST

[Net revenues of the four main-line railways, as given in the handbook "Facts about British Railways," issued by the British Railways Press Office for 1929 to 1938, inclusive, are as follow :—

	£		£
1929	45,000,000	1934	33,700,000
1930	37,700,000	1935	34,000,000
1931	35,100,000	1936	35,700,000
1932	28,700,000	1937	37,900,000
1933	31,000,000	1938	29,000,000

For the years 1931 to 1935 inclusive, the figures are revised to include the effect of the new basis of valuation for local rates.

For 1939 the net revenues of the four group companies, as given in the annual reports, totalled £36,900,000.

The Ministry of Transport "Railway Returns" show the following net receipts :—

	£		£
1923	42,900,000	1926	19,200,000
1924	39,000,000	1927	42,600,000
1925	36,700,000	1928	41,100,000

Over the whole period the average would appear to be £35,600,000 per annum, which is comparable to the £36,500,000 guaranteed the lines which includes £1,000,000 for non-controlled net revenue.

It was not suggested that the *revenue* position had been strengthened, except in so far as a lower limit had been inserted, but rather the negotiating position. The statutory sanction for Standard Revenue has been enforced to the extent that, notwithstanding many attacks upon it, before the Railway Rates Tribunal and elsewhere, the Government showed that it still recognised the railways' right to that revenue if it could be achieved.

The provision in the financial agreement between the railways and the Government for the linking of costs to charges is a safeguard against loss of revenue through rapid wartime increases of expenditure, for the Minister is bound to grant higher rates if he is satisfied that costs have increased.—ED., *R.G.*]

The Government and the Railways

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I read with interest your editorial on March 29 on the financial arrangements between the Government and the railways and the subsequent correspondence on the subject. Perhaps I might state my own view of the agreement.

First, I think the Government deserves credit for the terms it secured. By them it shifted on to the railways a host of its own problems, *e.g.*, (1) the difficult question of the L.P.T.B. in wartime ; (2) the financial risks of the control of private owners' wagons ; (3) the suspension of the Standard Revenue provisions of the Act of 1921. On the other hand, it took on certain drawbacks, *e.g.*, the need for adjusting charges to meet increased costs due to the war.

I should not care to offer an opinion at the moment whether the advantages outweigh the disadvantages. All that could be said is that if the Government can overcome the political difficulties inherent in charges adjustments it stands to gain handsomely. I must say that the method of presenting the recent increase gives me little confidence in its ability to make this part of the agreement work.

Second, the railways got a guaranteed minimum of £41 millions and the Standard Revenues as an upward limit to profits. This range stands on record in case it is required when control ends. On the other hand, the railways had to take the liabilities pushed on to them by the Government together with a drag on maximum profits. No one can say whether the physical and intangible assets (*e.g.*, goodwill) are fully protected, although the railways will obviously do their best to see that they are.

Here again it is hardly possible to say if the railways stand to gain or lose. On the debit side there is the burden of the L.P.T.B., which appears likely to be heavy, and the relinquishment of the Standard Revenue provisions, which, as the Minister has pointed out, could have been operated. On the credit side is the guaranteed minimum for post-war difficulties should they arise, and the delayed prospect of earning standard revenues (setting the range for acquisition if necessary). Unknown factors are private wagon finance, which may or may not be self-balancing, war damage in excess of £10 million, and the protection of the physical assets and of goodwill. Who can form a conclusion from these elements ? I would say as a tentative opinion that the main-line railways have been forced to accept a hard bargain, and I see no halcyon days for them during wartime or after, such as some critics seem to suggest. On the other hand, the L.P.T.B., which was bound to be a loser by the war, may have avoided the need for direct subsidy at the expense, in part, of either provincial users or main-line stockholders (it is not clear yet which).

Yours faithfully,

OBSERVER

Tank Wagons in Roumania

88, Gloucester Place,
London, W.1
April 29

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I beg to attach a list of the number of tank railway wagons owned by the various Roumanian oil companies at the end of 1938. My sources of information were various handbooks on the oil industry, giving details of companies' activities and properties. I believe that this information would be of interest to your readers at the present time and wonder whether you would publish this list.

Privately-owned tank wagons in Roumania

Company	No. of wagons owned
Astra Romana	1,393
Colombia, S.A.	238
Cometa, S.A.	45
Concordia	700
Creditul Minier	906
I.R.D.P.	305
Petrol-Block	654
Rendeventza	257
Steaua Romana	1,085
	5,583

Yours faithfully,

K. N. GESS

NEW POSTERS.—The L.N.E.R. has issued a poster drawing attention to the publication of the 1940 Holiday Handbook as a guide for a wartime holiday. The L.P.T.B. has issued several new scenic posters, topically reminiscent of spring, and also a poster showing details of the Green Line coach services at present working.

U.S.A. HIGHWAYS CASUALTIES IN 1939.—More than 32,000 persons were killed and over 1,200,000 were injured in accidents on the highways in the United States in 1939. Motor-car collisions with trains accounted for 1,590 of these deaths and 7,280 of the injuries. Commercial vehicles, principally lorries, were responsible for a very high proportion of the total casualties on highways. Commercial vehicles, which make up approximately 13·2 per cent. of total registrations, were involved in 19·6 per cent. of the fatal accidents.

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PUBLICATIONS RECEIVED

"Holiday Haunts."—There can be no doubt that the re-appearance of this attractive volume of holiday resorts on the G.W.R. will be a reassuring sight to many who are looking forward to a holiday in the West Country. No change has been made in the pre-war price—6d.—and the contents of the volume, which cover 750 pages, are divided into seven sections corresponding to G.W.R. holiday areas, which are described in pleasant text by Maxwell Fraser.

"Holidays by L.M.S."—Notwithstanding the war, the L.M.S.R. has had a keen demand and extensive advertising support for its holiday guide for England and Wales. The latest edition comprises 684 pages, of which 100 are devoted to photographs reproduced in gravure. More than 300 resorts in the diverse holiday districts served by the line are described. It is an excellent sixpennyworth. As usual, a separate "Scottish Holiday Guide" is also published.

"Holiday Handbook."—The 1940 edition of the L.N.E.R. guide to holiday resorts, which is now on sale at 6d. at all bookstalls, has been extended in scope so as to take in districts in other parts of England, Scotland, and Wales to those served by the line. Many illustrations are entirely new and a comprehensive index covering all the places mentioned in the book is a useful feature.

"Hints for Holidays."—The Southern Railway handbook on holidays is a well-established sixpenny annual and provides excellent reading for the many thousands of persons who yearly visit the coastal resorts with which this line is so well endowed. There are some 500 pages and the usual full lists of addresses of hotels and boarding houses. The illustrations are up to the customary standard, and the numerous places covered by the guide are adequately covered.

Summer Holidays, 1940.—Thos. Cook & Son Ltd. has issued its handbook of holiday arrangements for the current season. Owing to war conditions it is not possible to offer the extensive programme of organised travel abroad this year, nor will there be any pleasure cruises. In compliance with the Government request that reciprocal travel between England and France should not be discouraged, the company has planned a few short inclusive holidays in Paris and other parts of France. The handbook contains a wide choice of holiday arrangements in England, Scotland, Wales, and Eire. Although the well-known series of motor coach tours in the British Isles is not being operated, bookings will be accepted for a certain number of tours ma[de] wholly or partly by road services.

Manganese Steel Track.—A fou[r]-page brochure on switches, crossin[gs] and junctions in manganese steel h[as] been issued by Hadfields Limited, [of] Sheffield (Publication No. 440).

Pneumatic and Electric Tools.—Up-to-date leaflets covering the slud[ge] and sump pumps, pneumatic drill[s] power vane drills, electric hammers a[nd] drills, and the Midget balancer, ha[ve] been issued by the Consolidated Pne[u]matic Tool Co. Ltd.

Bakelite Resin.—As a substitu[te] for tung oil in varnish formations, [a] new Bakelite resin is being used i[n] conjunction with linseed oil. Informa[tion] sheet No. B.V.R.22-4/40, issued b[y] Bakelite Limited, gives full particular[s] of its characteristics and use.

Resignalling of Victoria Station and Approach Lines, Southern Railway.—The Westinghouse Brake & Signal Co. Ltd. has recently issued one of its series of handsome signalling brochures, reproducing the articles published in THE RAILWAY GAZETTE of October 21, 1938, and June 30, 1939, describing and illustrating the change-over from Sykes electro-mechanical equipment to colour-light signalling on the lines in and approaching Victoria station, Southern Railway. The brochure comprises 20 pages printed on excellent paper, and a large folding plate showing the layout of the lines and signalling.

THE SCRAP HEAP

The Spectator recently invited its readers to submit suggestions for "the most entertaining publishers' blurbs designed to advertise either *Hansard*, *Bradshaw*, or the *London Telephone Directory* as a book for general reading." We notice from the issue of our contemporary for March 29 that the first prize goes to Mr. A. H. Cooper for a note on *Bradshaw* that is described as having "just the right air of speciousness." Mr. Cooper's prize blurb is as follows:—

BRADSHAW

"Here at last is the perfect book. In its fascinating pages you can savour the delights of every corner of the British Isles. Esconsed in your easy chair, you can fly in fancy, as on a magic carpet, from Brandon to Flint, from Hook to Eye, from Stone to Plumtree, with the sure guidance of a cunning hand. There is no page without its hint of glamour and adventure—glancing down a list of stations in an industrial area, you suddenly meet 'Through Carriage to Lyme Regis,' and feel at once the tang of the salt sea air upon your cheek.

"Nor does the author limit your scope to the British Isles. Read the list of 'sailings' from our ports, and pass at once to the wonders of every clime.

"This work is a model of lucidity; for sheer bulk it has the novel beaten; there is the charm of the crossword without its tricks; there is the beauty of reality unadorned but clarified, and, embracing the hard core of fact, there is a frame embellished with fancy. Wherever you arrive by train, on coast or mount or plain, there are eager hosts awaiting you to minister to your needs. Fortunatus can pick out his very bedroom from the pictured pile—John Citizen can choose his modest inn.

"This is nothing in the whole range of literature to compare with this!"

* * *

FARES ON THE HIRE-PURCHASE SYSTEM

In no other country is the hire-purchase system so widely in force as in the U.S.A. Two of its latest developments in that country are in connection with pleasure cruises to Bermuda and elsewhere and with railway travel. In both cases the passenger, on payment of a small first instalment, may proceed to his destination and settle for the remainder of his fare by the payment of further instalments spread over a period of months or years after his or her return.

* * *

M. Sorel has announced to the Academy of Sciences the invention of a safety valve which, at the moment the pressure has passed a certain limit, announces the fact by a whistle and stops the combustion of the fire by shutting a register or damper.—*From "100 Years Ago" in "The Glasgow Herald" of April 3.*

"CHAIRWAY TO THE STARS"

The new two-mile long electric chair ski lift recently completed to the top of 9,200-ft. Baldy Mountain, Sun Valley, Idaho, and known as the "Chairway to the Stars," is stated to be the longest ski lift in the world. This chairway was constructed by Union Pacific Railroad engineers and cost a quarter of a million dollars to build. It is in three sections. The first section, which begins at a point 5,947 ft. above sea level, is 3,792 ft. in length and reaches to an elevation of 6,554 ft. The second section, which is very steeply graded, is 3,776 ft. in length and rises to the summit of Baldy Ridge, 7,876 ft. above the sea. The third section is 3,976 ft. long, and reaches the summit of Baldy Mountain, 9,200 ft. above sea level. An endless chain of chairs serves to carry the passengers, and the ride takes 20 min. These chairs are suspended from a 1-in. steel cable supported on 60 steel towers. At the bottom of the lift, the chairs pass by very slowly, allowing passengers to jump in and get seated. A steel cross bar to which a foot rest is attached is swung in front of the passenger's body. A safety strap is attached to the cross bar and a blanket is fixed to the bar. The speed of the chair is then increased to nearly 6 m.p.h. Electric motors drive the cables; each motor is equipped with automatic brakes which are applied immediately if the power should fail.

XUM

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

INDIA

The B.B. & C.I.R. Contract

The press in India understands that the question of termination by the State of the Bombay Baroda & Central India Railway Company's contract is now being considered by the Government, as it is terminable on December 31, 1941, and one year's notice has to be given to the company if the decision is in favour of termination.

Description of the Railway

This railway, more or less as at present constituted, was purchased by the Government in 1905, and the principal contract for working by the present company dates from 1907, though this was revised in 1913. The State guarantees 3 per cent. on the company's capital of £2,000,000. The system consists of just over 1,000 miles of broad-gauge lines, in addition to 224 miles worked on behalf of native states or other companies, and nearly 1,900 miles of metre-gauge, plus 146 miles worked for other owners. There are also 224 miles of 2 ft. 6 in. gauge. The principal equipment consists of the following :—

Broad gauge: 362 locomotives, 40 electric motor coaches, 978 carriages, 16 motor vans, and 10,201 wagons.

Metre gauge: 465 locomotives, 1,471 coaches, 3 Sentinel railcars, and 9,477 wagons.

2 ft. 6 in. gauge 27 locomotives, 72 coaches, and 337 wagons.

There are 37 route miles in the Bombay suburban area which are electrified and carry a heavy traffic, and the main line provides the shortest route between Bombay, Delhi, and Northern India.

If the change is made, the State will operate five of the largest systems, namely, the N.W.R., E.I.R., G.I.P.R., E.B.R., and B.B. & C.I.R.

Re-selling Used Tickets

About 50 persons, including some railway employees, were recently arrested on the charge of re-selling already-used tickets issued by the E.B.R., as a result of house searches in Calcutta by the C.I.D., which revealed an alleged conspiracy to defraud that railway.

Quicker Wagon Turn-Round

The committee appointed by the Railway Board to investigate the turn-round of wagons on broad-gauge railways, visited Calcutta again recently to discuss various matters with the East Indian Railway administration. The committee has already visited the railways centreing round Calcutta, Bombay, and Madras, and, after making inquiries on the North Western Railway, will draw up its report in Delhi. The purpose of the inquiry is to devise means of shortening the time that lapses between the loading of a wagon, its journey to destination, and its unloading and reloading with another load.

NEW ZEALAND

New West Coast Railway

Good progress is reported in constructing the line to connect Westport, an important hard-coal mining centre, with Inangahua junction on the West Coast system of the South Island, and so, by way of the Midland line, with the South Island main line and branches.

The Stable creek bridge over a tributary of the Buller river, 16 miles from Westport, has just been completed. This is a modern reinforced concrete bridge of a type new to railway construction in New Zealand. The bridge consists of ten 40-ft. spans and one 20-ft. span on reinforced concrete piers. The height from the foundations to deck level is 60 ft. The bridge contains 1,650 tons of concrete and 105 tons of reinforcing steel. It is constructed wholly on a curve of 20-ch. radius. Ballasted permanent way is laid on the deck slab which has a concrete kerb at each side to retain the ballast. Also on the downstream side of the deck there is a 3-ft. wide footway with a handrail for railway surfacemen. At the ends of the bridge an ingenious type of concrete hinge is incorporated to allow for expansion and contraction in the structure.

The survey of the line made provision for 28 bridges over the many precipitous gullies on the north side of the Buller gorge, but the actual number has finally been reduced to twelve. Some of the bridges originally contemplated have been eliminated by the construction of water drivers, or small tunnels bored through the sides of creek beds and lined with concrete, and also by substituting very large reinforced concrete culverts over which filling is tipped.

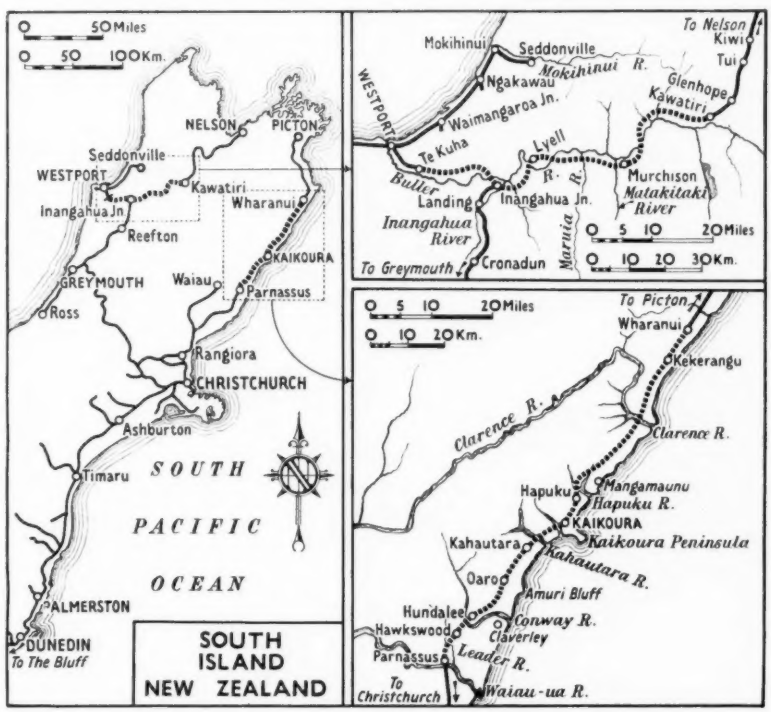
The total lengths of bridges on the line between Cascade creek and Inangahua station is 3,600 ft. Five bridges having a total length of 2,290 ft., have been completed, namely Cascade, Redmond, and Stable creek bridges, and two large structures over the Buller and Inangahua rivers at Inangahua junction. Another five bridges of a total length of 1,002 ft. are at present being built.

Platelaying, trimming of the side slopes, culverts, and other work is also proceeding satisfactorily. The engineer hopes the rails will be connected up before the end of 1940. After a few months of finishing work in ballasting, construction of telephone lines, and fencing, the line will be handed over to the Railway Department for operation.

BRITISH HONDURAS

The Guatemalan Claim

The claim of the Guatemalan Government against Great Britain was the



Two maps (left and top right) showing position of new west coast extensions, under construction and proposed

subject of a leading article in the Mexican newspaper *Nacional* of March 27, following a speech made by President Cárdenas on March 18. Guatemala, it states, claims British Honduras, on the ground that Great Britain failed to implement the treaty of 1859, which stipulated, among other things, that Britain should build a railway from Belsize to the Guatemalan frontier. This question has been the subject of German anti-British propaganda in Central America since the outbreak of war.

CANADA

Head-on Collision on C.P.R.

Canadian Pacific train No. 4, hauled by a "2,800" class Hudson type locomotive and consisting of 10 cars, was recently running at about 70 m.p.h. some 15 miles west of Medicine Hat when it met a pusher engine head-on. The latter was seriously damaged and its leading wheels were thrown a distance of 750 ft. The Hudson engine went down the embankment and its tender was thrown at right angles to the track. The mail and baggage cars next the tender were also thrown into the ditch and the former caught fire, its contents being burnt. The remainder of the train was not derailed, but only 17 pieces of crockery in the dining car were unbroken. The remarkable thing about the accident was that no one was killed. It is reported that the pusher engine was not turned into the siding at Dennis as it should have been.

Montreal Central Terminal, C.N.R.

The resumed work upon the new C.N.R. terminal beside Dorchester Street at Montreal is now showing marked progress. The permanent way has already been laid from the Cathcart Street portal of Mount Royal Park tunnel along the platforms, through the south end of the new station site, and for some little distance along the approach viaduct, which will eventually connect the new station with the main lines (*a*) from Ottawa, Toronto, and the West, and (*b*) to Quebec and Halifax *via* the Victoria Jubilee bridge.

The lines already laid on the viaduct are being used for stabling stock required for the existing traffic northwards *via* the tunnel. The remainder of the viaduct is mostly completed except for the Smith Street and Lachine Canal bridges, of which the superstructures have not yet been fabricated. The big bridge which will carry Lagauchetiere Street over the new station yard is virtually ready for opening to road traffic.

SPAIN

The Barcelona Underground in the Civil War

In presenting the reports and accounts to the shareholders at the annual general meeting of the 5 ft. 6 in. gauge Barcelona Metropolitan (Transversal) Railway, reference was made to the seizure of the company's property by the Republicans. It was impossible to read the minutes of the previous meeting, held in 1935, or to give any information as to the working of the railway during the period between that date and the end of the civil war, as all the records and accounts, and even the counterfoils of shares and debentures, were destroyed by the collectivists, who evidently counted upon the entire disappearance of the company and its share and bondholders. The funds in the banking accounts of the company, amounting to 1,164,257 pesetas, were transferred to other banks in the names of three of the members of the "Workers' Committee," and have now been written off as a loss.

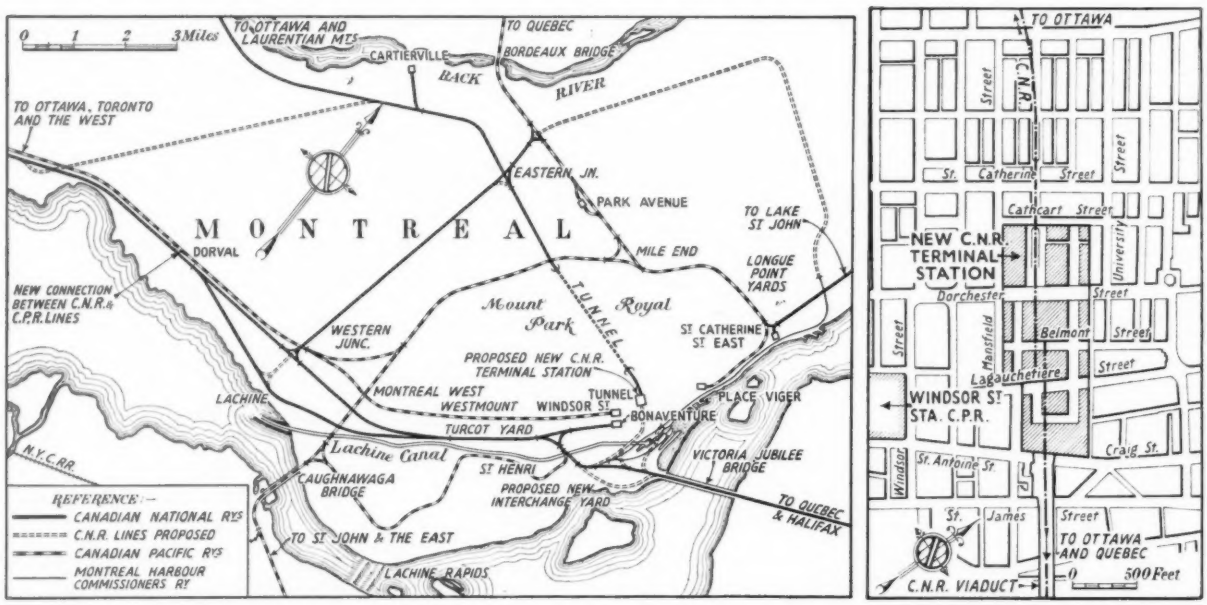
Property and Staff Suffered

The company regained possession of its railway on January 27, 1939. The stations and track were found to be in a lamentable state of dirt and neglect. The Plaza Cataluña-Marina section had been closed altogether for several months, and four of the cars were out of service. The report acknowledges the assistance of the Military Railway Department in the restoration of the line and equipment. References are also made to those officers and employees who lost their lives, several of them by assassination, in the company's service, including the engineer who was responsible for the original project and concession of the railway, Don Fernando Reyes.

MOZAMBIQUE

Railway Budget

In the 1940 budget for the Ports, Railways and Transport Services of Mozambique, the Director, Major Pinto Teixeira, draws attention to the steady fall in revenue of the Lourenço Marques system of railways from £783,590 in 1936 to about £720,000 in 1939. Despite any traffic from the new Ungubana—Guija branch, the estimated revenue for 1940 is only £713,700. Gross revenue from the ports and rivers is estimated to remain almost stationary at £336,000, and road motor services are expected to earn £11,700. Estimates of gross transport and port revenues in the other districts are: Inhambane and Gaza £31,725; Quelimane £25,515; Mozambique £49,050.



Left: Plan of Montreal city and its existing and proposed railways and stations, and (right), plan of immediate vicinity of new C.N.R. terminal

OVERLAPS

On ordinary main lines the well-known distance of 440 yd. is justified and should not be reduced

By H. C. TOWERS, Signal Engineer, Metre-Gauge Lines, B.B. & C.I.R.

THE term " overlap " is perhaps most commonly used in reference to automatic and power signalling. There are other terms such as " over-run " (English practice) and " adequate distance " (Indian practice). Mr. L. H. Kirkness, on page 43 of his book " Principles of the Absolute Block System," published in India in 1929,* defines the term " adequate distance " as follows :—" In no case may a train running at speed be brought up to a stop signal at danger unless there is beyond that stop signal an adequate distance clear—a margin of safety, that is—in case a driver over-runs. This adequate distance varies from at least 440 yd. beyond the first stop signal to at least 200 yd. beyond the starting signal."

A decade or so ago 60 m.p.h. was thought a high speed ; now, train speeds of over 125 m.p.h. have been recorded. Even local electric trains may attain over 50 m.p.h. With such great variations in speed the problem of overlaps becomes difficult. If an overlap is provided of sufficient length, plus a safety margin, to suit the fastest train on the line, then slow train traffic may be severely impeded.

Adequate Distance

One definition of " overlap," contained in the rule book says, " The adequate distance shall be the stopping distance of a train running at the highest speed permissible in the particular locality, with due allowance for speed, weight, brakepower, gradient, and the distance from which the signal can be seen by the driver of a train." This is not a particularly satisfactory conclusion. If the sighting point of a signal is 1·25 miles in rear of it, and the braking efficiency of the train is such that it can be brought to a stand from a speed of 50 m.p.h. in 0·6 mile, it would appear that theoretically no overlap is required. If, however, the sighting point is only 0·25 mile away the overlap would require to be 0·35 mile in extent. This basis of deduction takes into account the variable factor of the human element. To this may be added such contingencies as a burst water gauge or other footplate troubles. To what extent does the sighting point contribute towards the safety factor when, in such cases, the engine crew may become aware of the danger aspect of a signal only when they are right on top of it and the overlap provided for them is too short ?

Limit in Shortness of Overlaps

In multiple-aspect signalling overlaps may be considered on the basis that drivers receive a preliminary warning of a stop signal and therefore reduce speed before sighting it. If this is accepted, a relatively short overlap only is required, to cater for errors of judgment in braking. But for an overlap to be fully effective it should provide for the worst possible condition, that of a driver having completely missed a signal and then being suddenly confronted with a danger signal. Such cases are not unknown. The collision at Farringdon on May 1, 1939, between an electric train and a steam engine, was caused by the driver of the former starting away from the platform against the starting signal. The automatic train stop came into operation but the overlap was too short to prevent the accident.

Collisions through Missed Signals

A study of official accident reports shows there are many cases on record of serious collisions caused through drivers missing signals, or observing them but failing to recognise the danger aspect. Such were :—

(*a*) Gale Street, L.M.S.R., November 24, 1926 : Collision between two passenger trains.

(*b*) Fenchurch Street, L.N.E.R., January 26, 1927 : Collision between light engine and passenger train.

(*c*) Sheffield, L.M.S.R., May 14, 1927 : Collision between light engine and express.

(*d*) Wimbledon, S.R., June 27, 1927 : Collision between two District Railway trains.

(*e*) Ashchurch, L.M.S.R., January 8, 1929 : Collision between express and goods train.

(*f*) Pontypool Road West Junction, G.W.R., July 6, 1929 : Rail auto-train ran into goods train. The driver of the auto-train started from the station, failing to observe the starting signal at danger.

(*g*) Tottenham North, L.N.E.R., October 4, 1929 : Collision between goods train and express.

In the last-mentioned case the goods driver was standing at a signal and, hearing a noise like a signal being operated, moved forward without bothering to look at the signal. In connection with the Ashchurch accident a portion of Colonel Mount's report is relevant to the matter under discussion. He said :—

" The accident is therefore a serious reminder of footplate difficulties. The same alertness of mind and judgment, quickness of eye and hand, are not common to all. Momentary lapse or hesitation, resulting from psychological or physical factors, when operating at high speed, may neutralise all signalling safeguards. During the last 30 years, more perhaps has been done towards the protection of the signalman from error than towards assisting the driver in this respect. Weight of trains and power of locomotives have increased by 50 per cent., and more recent developments of block working procedure and signalling practice, with the object of attaining closer working while maintaining speed, add still further to the driver's responsibilities."

Distance of 440 yd. should be Retained

London Transport and other undertakings using automatic train stops, calculate their overlaps on the assumption that a train passing a signal at danger would do so at the maximum speed permitted on the section, the sighting distance of the signal not being taken into account at all. Even where train stops are not in use it would appear that the overlap should be designed on the same basis, so that a driver has adequate braking distance if he has missed a yellow or cautionary aspect, or become aware of a danger signal when too late to stop at it. The over-run in English practice is seldom less than 440 yd. and the same distance, in the case of outer signals, is observed in India. In the absence of automatic train stops the distance appears to be very reasonable and there seems no case for reducing it.

* Government of India : Technical Paper No. 266. Obtainable from High Commissioner for India, India House, Aldwych, London, W.C.2. Price 3s. 6d.

XUM

H.E.H. THE NIZAM'S STATE RAILWAY

Ten years of progress under the present administration—Continuous increase of facilities—Inauguration of air transport—Additional railways opened—Staff welfare—Record earnings

THE administration of H.E.H. the Nizam's State Railway owns 1,302 route miles of line and works for the Government of India the 22 miles of the Bezwada Extension Railway and the 36 miles of the Dhone Kurnool Railway. Of the total worked, 688 miles are broad gauge and 672 metre gauge. As shown by the full report for the financial year ended March 31, 1939, which we recently received from the Acting General Manager (Mr. F. Blair), the metre-gauge mileage has been increased by the opening on December 17, 1938, of the 12-mile branch between Jankampet and Bodhan. This branch has been constructed in order to feed a large sugar factory established under Government auspices at Bodhan. A preliminary statement in respect of the year 1938-39 was published in THE RAILWAY GAZETTE of May 12, 1939, at page 769.

The year under review was one of considerable activity and progress in the provision of facilities. Nevertheless, the improvement in financial results of the railway system, which had been continuous and very marked since 1935, was arrested during 1938-39, mainly because there was a large reduction in earnings from cotton traffic due to a partial failure of the crop and to diversion of traffic to the G.I.P. Railway as the result of the quotation of low railway rates to meet road competition in British India. The small decrease in passenger earnings accompanying a substantial increase in the number of passengers was due to the extended use of concession travel tickets. Without these further concessions, political conditions and partial crop failures might well have caused an appreciable diminution in passenger earnings. The decrease in goods revenue in spite of an increase in tonnage was due mainly to a decrease in highly-rated commodities, particularly cotton. Coal, grain, ground nuts, oilcake, and sugar obtained record earnings. The percentage of ordinary working expenses to earnings (apart from depreciation) for the entire system was 41·9 in 1938-39, against 40·2 in 1937-38. In the year under review the working ratio was adversely affected by the loss of highly-rated traffic and by the costs largely incidental to congestion at Bezwada, but an increase of 4 per cent. in train mileage was accompanied by a decrease of 2 per cent. in cost per train mile, despite an increase of 9 per cent. in the cost of fuel. In the accompanying table some operating figures of the entire railway system are compared:—

	1937-38	1938-39
Route miles	1,348	1,360
Passengers	8,795,060	9,086,753
Tons	2,795,832	2,881,977
Train-miles	3,729,906	3,885,704
Operating ratio, including depreciation	47·3 per cent.	48·9 per cent.
	Rs.	Rs.
Passenger receipts	61,78,096	61,55,636
Goods receipts	1,65,72,705	1,64,84,390
Gross earnings	2,45,15,138	2,42,61,742
Working expenses	1,15,88,513	1,18,65,741
Net earnings	1,29,26,625	1,23,96,001

Earnings of the road services for passengers and goods operated by the administration were Rs. 28,65,783 during the year under review, compared with Rs. 29,43,536 in the previous year. This decrease in earnings was due principally to the serious increase in private road competition. It was also due to some extent to the failure of crops and the unsettled conditions in some districts on account of communal trouble. Air services operated by the administration during the period January 1, 1938, to March 31, 1939, brought in gross earnings of Rs. 97,244. The return in 1938-39 on the combined transport undertaking (railway, road, and air) was 7·61 per cent. On the railways owned by H.E.H. the Nizam's Government the percentage of net earnings on capital outlay was 7·99 per cent. for the year 1938-39.

We have now received from Major E. W. Slaughter, the General Manager, preliminary figures for the year ended March 31, 1940. It is the practice of the administration to issue a preliminary review of operations soon after the close of the official year. The final accounts and statistics are not ordinarily available until later. The year that has just ended marks the close of the first decennium since the acquisition of the railway by His Exalted Highness. Remarkable progress has been made in the transport industry of the State during the first ten years of its administration by the Nizam's Government. During this period, 122 miles of new railway have been added and another 100 miles are under construction. Road transport services have been undertaken by the railway and 4,082 miles of road are now being operated by the State Railway Road Transport Department, with an up-to-date fleet of buses and lorries totalling 300 vehicles. Air transport has been inaugurated in the State, charter flights are undertaken, an up-to-date aerodrome has been built and equipped, and commercial air services are being initiated. Amenities to the travelling public, particularly for the benefit of third class passengers, have received considerable stimulus during the ten years. Staff welfare schemes such as housing, medical facilities, better service conditions, etc., have also constantly engaged the attention of the administration.

It is gratifying to note that the period closes with a record year as regards gross and net earnings and the tonnage carried. The State exchequer has received over 10 crores of Bts. rupees during these ten years from the operation of the railway, after making due provision for depreciation; 100 million passengers and 25 million tons of goods have been carried over the State Railway. The number of passengers carried by the road transport services since their inauguration in 1932 is approximately 63 millions.

Expected financial results of the combined undertaking embracing the State railway and road transport services for the year ended March 31, 1940, as compared with the previous year are as follow:—

	In lakhs of Bts. rupees	
	1938-39	1939-40
Gross earnings	271	284
Working Expenses	148	152
Net earnings	123	132
Net earnings of Government of India Sections (58 miles of railway)	8	8
Net earnings of H.E.H. the Nizam's Government Railway and road transport	115 lakhs	124 lakhs

There has been a substantial rise of about Rs. 12 lakhs in the gross earnings of the railway in 1939-40 as compared with the previous year, resulting from good crops and favourable demand. Important increases were in cotton traffic (Rs. 5 lakhs) and coal (Rs. 4 lakhs). Railway working expenses recorded an increase of about Rs. 6 lakhs due partly to the increase in traffic, and partly to the increased allotment to the depreciation fund.

XUM

ROAD TRANSPORT SECTION

This section appears at four-weekly intervals

Railway Shares in Road Haulage

ALTHOUGH not returning such a high rate of interest as the shares in bus companies, the railway companies' investments in road haulage undertakings also produce very good earnings. At the end of 1939 they amounted to £2,563,076, of which sum £1,342,996 is invested in Carter Paterson & Co. Ltd. (equal shares of £335,749), and £840,284 in Hay's Wharf Cartage Co. Ltd. (of which Pickfords Limited is a subsidiary). In addition, the L.N.E.R. holds £84,808 in Currie & Co. (Newcastle) Ltd., and £17,000 in J. W. Petrie Limited, while the L.M.S.R. has £135,049 invested in Joseph Nall & Co. Ltd., and £142,939 in Wordie & Co. Ltd. The interest upon these investments last year amounted to £166,652 or 6·50 per cent., compared with 5·80 per cent. in 1938. The most profitable holding was that in Hay's Wharf Cartage Co. Ltd., which yielded a return of 11·78 per cent. The percentage return on the Carter Paterson investment was 4·46.

Canada Prefers Long-Distance Rail Transport

IT seems that the commercial carriage of goods between Montreal and New York by motor lorry will no longer be permitted, for the Quebec Transportation & Communication Board issued a judgment on February 24 refusing to grant permits and declaring that "long-distance goods transportation should be left to the railway companies." This is a recognition of the claim of the railroads that they are competent to handle all business between the two cities, and it is understood that temporary permits granted since last September, during the course of the board's investigations, are rendered invalid and will not be renewed. The board had been called upon to adjudicate in the case of Carl's Transportation Co. Ltd., which was accepted as a test, of which the decision would be made applicable to a number of other road transport companies also seeking permits. The railway companies (the New York Central, the Delaware & Hudson, the Napierville Junction Railway, the Canadian National, and the Canadian Pacific) and the Canadian Institute of Plumbing & Heating opposed the requests on the main ground that the railways were well able to give a fair service for the transport of goods between Montreal and New York; that they had gone to considerable expense to organise the service; and that the operations of the motor lorry or trucking companies constituted unfair competition. On the other hand, the lorry companies produced a number of expert witnesses and company officials to support the view that they were giving a fair service and that it was profitable to the public. The conclusion of the board was that it was not in the public interest to permit the applicants to maintain a service between Montreal and New York for the reason stated above, namely, that long-distance goods transport should be left to the railways. The ruling also stated that the railway companies were well organised for the transport of goods from Montreal to New York, at fair prices, even as to perishable goods. Furthermore, the Order stressed that it would not be profitable for lorry companies to deal only in perishable goods. The board felt it would not be justified in issuing permanent permits to conduct this trade to the detriment of the railway companies, and, moreover, the Order prohibits the transfer of goods from one road transport company to another at the Canada—U.S.A. border. It is understood that no appeal from the decision can be made.

Sixth Indian Roads Congress

IN opening the sixth Indian Roads Congress held in December at Bombay, Sir Roger Lumley, Governor of Bombay, observed that communications were the arteries of the economic, social, and political life of a country, and in the active pursuit of the subject of communications, the congress was making no mean contribution to the building not only of roads and bridges but a healthier, happier, and more prosperous India. India could not afford the expensive roads found in Europe and America, and for many years to come the railways must remain the principal means of long-distance communication. It was the function of the various administrations concerned to lay down the broad lines of policy to be adopted, and His Excellency felt that the congress had done well to survey the road problem on the broadest lines, with a view to indicating how a system of communications might be secured with a balanced relation to the various methods of transport. Mr. K. G. Mitchell, Consulting Engineer (Roads) with the Government of India, presiding over the congress, reviewed the system of road communications in British India. He mentioned that out of 284,000 miles of roads, there were only 9,000 miles of roads with modern surfaces, all built within the last 15 years. There were also 38,000 miles of stone-metalled roads; 17,000 miles with kankar moorum and laterite surface; 20,000 miles of gravel and inferior types; and 200,000 miles, or about 70 per cent. of the entire system, were natural earth roads.

The Nizam's State Railway Road Services

SOME figures of the passenger traffic handled by road services of the Nizam's State Railway administration during the year ended March 31, 1939, were given in THE RAILWAY GAZETTE of June 2, 1939, at page 899. Considerable efficiency has resulted from the scheme of centralisation in the department. During that year both the administrative offices and the workshops were shifted to a new site in Mettuguda, a suburb of Secunderabad. The operation and maintenance work of the road services throughout the Nizam's dominions are now handled in the new central office which is situated within the grounds of the new and up-to-date workshops. The route mileage operated by road vehicles increased from 4,017 in 1937-38 to 4,069 in 1938-39. Gross earnings declined from Rs. 29,43,536 to Rs. 28,65,783. Coaching earnings fell from Rs. 28,37,995 to Rs. 27,50,906, and miscellaneous from Rs. 32,385 to Rs. 20,384, but goods earnings advanced from Rs. 73,156 to Rs. 94,493. Preliminary figures for the year ended March 31, 1940, which have now been supplied to us by Major E. W. Slaughter, the General Manager, show that the route mileage operated in 1939-40 was 4,082. Gross earnings increased by about Rs. 85,000 but in working expenses there was a substantial drop of Rs. 2¼ lakhs due partly to the beneficial effects of the improved maintenance organisation set up in the previous year. The number of passengers carried, 12 millions, was slightly more than in 1938-39 and the goods tonnage increased by 11 per cent. to a little over 58,000 tons.

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Train-Motorcar Service for 150 U.S.A. Cities

AN interesting and enterprising innovation came into operation on May 1 on eleven of the western American railroads, when new train-motorcar travel service was introduced at 150 cities served by the railways. Through Railway Extension Inc. the traveller will be able to arrange, when he buys his ticket, to have a current model private five-seat motorcar awaiting him when he reaches his destination. Alternatively he can arrange after he arrives for the use of the car. Several popular makes of car will be used and the rates charged for their hire will cover petrol, oil, maintenance, and insurance. They range from 80 cents for 1 hr. and the covering of 10 miles to $28 for 1 week and 350 miles. With a minimum of 1,000 miles a week, a 6½ cent rate becomes effective, making the cost $65 for 1,000 miles. The new service will prove valuable to the traveller who likes the use of a car at certain points but who dislikes or cannot afford the time involved in the long intermediate distances. The railroads participating in the plan are: the Burlington Lines; Chicago & Eastern Illinois; Chicago, Milwaukee. St. Paul & Pacific; Chicago & North Western; Chicago, St. Paul, Minneapolis & Omaha; Great Northern; Illinois Central; Northern Pacific; Rock Island Lines; Santa Fe System Lines; and Union Pacific Railroad.

The U.S.A. Motor Lorry Industry

THERE is not a motor lorry built that can travel legally in every one of the 48 States of the U.S.A., according to an address on "Waste in Distribution" which was given to the Advertising Club of Boston by Mr. George H. Scragg on February 27. Mr. Scragg is the Director of Advertising & Sales Promotion of the White Motor Company of Cleveland, Ohio, and, although a native of the U.S.A., has had business experience in London, Paris, and Toronto, and for a time managed a large motorbus company in Cuba in order to gain practical knowledge of motor vehicle operation. Among many factors in United States industry which he quoted as contributing to waste in distribution were various conflicting features of the individual State laws governing the movement of motor vehicles. For example, in the State of Massachusetts there is a limitation of 40,000 lb. gross on any motor vehicle. In the neighbouring State of Connecticut there is a similar law, but adjacent to Connecticut is New York State where a possible 52,800 lb. may be carried. Next to New York, in New Jersey, 60,000 lb. may be carried on similar equipment and, under certain conditions, even 80,000 lb. Thus, a business established in Connecticut which manufactured a commodity that was moved in relatively large tonnages, and wished to get into the New York market daily 50 tons of merchandise, would require five lorries, for that is all the payload which can be carried on an average with a limitation of 40,000 lb. gross. A competitive concern located in New Jersey, equi-distant from the delivery point in New York, with the 60,000 lb. gross limitation can deliver similar loads with three lorries.

The speaker contended that Americans were rapidly setting up barriers between States and so tending to increase the cost of transacting business. Apart from port-of-entry and similar laws affecting motor vehicles, and methods to force lorry operators to buy their fuel supplies within the border of the States they are visiting, many other regulations are gradually creeping in to restrict trade. For example, it is necessary to pay a tax on advertising material distributed in the States of California or Ohio, unless it is printed within the borders of those States. At present, said Mr. Scragg, the taxes on motor vehicles are not so great but that they can be borne, but there is a growing tendency to take the money collected from the lorry operator and divert it to other purposes. One out of every eight dollars paid in taxes by the motor vehicle user is now used for other than road purposes. The railroads are, of course, a very important factor in distribution; in fact, he said, "they are more important than they themselves will admit." In the U.S.A. today there are 4½ million lorries but only 600,000 are in public transport service. These employ 600,000 drivers and 400,000 men attending to off-road duties, or more than are engaged in any other form of transportation. The business handled has a gross value of two thousand million dollars a year, 50 per cent. of which goes into wages.

Nevertheless, this volume equals only 5 per cent. of the country's commerce. Of the 122,473 communities in the U.S.A. served by lorries, 48,492 have no railroads—two out of every five, embracing a population of some 7,900,000 persons. What the motor lorry means to certain communities is exemplified by what happened in the Western Valley of Vermont in recent years. When the railroad in this area was destroyed by floods in 1927, the State contributed $200,000 towards rebuilding the line. Nevertheless, by 1932, the railroad was abandoned and motor transport took over. In the last year of its operation, the railroad paid nothing in taxes to the State, and $312 to the counties and local communities. In 1937, the last year for which figures are available, the lorries paid in taxes $34,554, or 110 times as much as the railroad had paid. On the question of taxation it is interesting to note that motor transport handles 5 per cent. of the nation's transport business, and the railroads 66 per cent. The railroads are stated to pay taxes of 1 million dollars a day or $365,000,000 in a normal year; in 1937, it was actually $325,000,000, excluding social security and railroad retirement. In *special* taxes, motor transport in the same year paid $417,500,000. In fact, said Mr. Scragg, the users of the highways paid $1,781,000,000 in 1938, and one of every $8.00 paid was used for other than road purposes. In conclusion, the speaker controverted the impression that most motor lorries travel great distances carrying goods from one city to another. As a matter of fact, he said, most lorries are used in short hauls; more than a third of the trips are under five miles and 80 per cent. of them are under 20 miles.

Road Bridges in New South Wales

THE Department of Main Roads of New South Wales has constructed 911 bridges since 1925, at a cost of nearly £2,500,000, and has at the present time under construction a number of notable new bridges. The largest of these is at Peat's Ferry, over the Hawkesbury River. Here there will be two 438-ft. truss spans, eight 90-ft. deck plate girder spans, eight 40-ft. R.S.J. spans, and a short approach span at the south end. The bridge will have a total length of 1,988 ft., and will carry a 30-ft. roadway with a 6-ft. sidepath. Another big bridge, which will measure 1,518 ft. in length, will replace a steam ferry at Taree, over the Manning River. In it there will be an electrically-operated vertical lift span. Near Mundowy a bridge with three 30-ft. concrete girder spans and three 100-ft. steel truss spans is being erected over the Murrumbidgee. A good deal of use has been made of reinforced concrete frame bridges and slab concrete structures in the bridge building programme of the N.S.W. Roads Department, and both riveted and welded construction has been employed with success in steel bridges. Timber structures of Australian hardwoods are now being provided with a new design of timber deck by which the use of spikes is eliminated. All joints and butting surfaces in timber bridges which will be inaccessible after erection are coated with creosote oil.

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Road Transport and the War—8

Regional organisation—Alternative fuels—Materials for motor manufacture—London bus headlamp masks—More railway horses

The functions of government in Great Britain are exercised in part by the central authority in London (and to some extent in Scotland through Edinburgh), and in part by the local authorities. Of the latter, the largest units are the counties. Within recent years there has been a tendency to introduce larger areas for specific purposes, such as the traffic licensing areas set up by the Road Traffic Act, 1930, but for general local government the county has direct contact with the Central Government. The administrative counties of England are more numerous than the historic counties, since several of the old English counties have been sub-divided into two or three administrative counties. Thus, Yorkshire is divided into three administrative counties, and Sussex into two, all of which deal directly with the Central Government in London. Moreover, London itself was made an administrative county in 1888, taking over the inner Metropolitan portions of Middlesex and Surrey. As a result of such changes, the total number of administrative counties in England & Wales is 63. In addition, the larger towns and cities are classed as county boroughs and are virtually independent of the geographic and administrative counties. There are in England and Wales 83 of these county boroughs, which, with the 63 administrative counties, gives a total of 146 independent county units. Scotland, by reason of having certain separate laws, and a governmental centre at Edinburgh, is in a slightly different, although generally similar, position.

Wartime Regional Organisation

The Munich crisis of September, 1938, demonstrated that, to secure prompt co-operation of all concerned, it was advisable to group the county units into an emergency organisation. The local governments were placed into twelve regional groups, and regional commissioners appointed to control them. It was arranged that the commissioners should not exercise their control in peacetime, but should act merely in an advisory capacity and hold themselves ready to assume all necessary powers on the outbreak of war. Eleven of the twelve regions, shown on the accompanying sketch map,* are based on the existing boundaries of administrative counties, with the two slight exceptions that (1) the Poole area of Dorset is attached (with Hampshire) to the Southern Region, whereas most of Dorset is in the South-Western Region; and (2) the Glossop and Buxton corner of Derbyshire are placed in the North-Western Region, whereas the rest of Derbyshire is in the North Midland Region. The twelfth region is a specially-constituted Metropolitan Region. Other wartime services have been based on the same twelve regions as those of the Ministry of Home Security, such as the Ministry of Supply and the price-regulation committees.

These regions have been adopted for road transport purposes and are Areas under the control of Regional Transport Commissioners. The ordinary road transport licensing machinery was suspended on the outbreak of war, and the Minister of Transport assumed general responsibility for road transport, both goods and passenger. The peacetime Chairman of Traffic Commissioners & Licensing Authority became the direct representative of the Minister of Transport in the Civil Defence Region coinciding most nearly with his peacetime Traffic Area, and assumed the title of Regional Transport Commissioner. He exercises powers on behalf of the Minister in connection with fuel rationing and issuing defence permits for goods and public service vehicles; varying existing road service licences and allowing new bus services to be inaugurated rapidly to meet changing circumstances such as the re-distribution of population, the setting up of camps, and the transport of munition workers; and assisting in the arrangements of Government Departments with operators for evacuation schemes.

Gas and Producer-Gas Vehicles

In reply to a question in the House of Commons early in April, the Secretary of Mines said that although exact figures were not available there were now at least 125 producer-gas road vehicles running in this country.

Mr. L. C. S. Amery (Sparkbrook, Birmingham), in the discussion on the Budget on April 24, said that he was disappointed that the Chancellor had made no reference to

Sketch map of the civil defence regions of Great Britain. They are also the regional transport areas, but for this purpose No 8 is sub-divided as shown

* The Electrical Press Limited (60, Kingsway, W.C.2) has just issued a map of these areas, scaled about 23 miles to the inch, price 2*s.* 6*d.*

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the possibility of some effective change of taxation to bring about the substitution for petrol-driven lorries of gas-propelled vehicles. There was a great field in this direction for substituting domestic raw material in our transport industry for imported raw material. Germany was compulsorily turning the whole of its domestic lorries over to gas. Why could we not do the same? A little rectification of the weight regulation for purposes of taxation to compensate for the extra weight of gas containers was not enough. What was wanted was some substantial bonus that would directly and immediately encourage every type of lorry to go off petrol and on to gas.

Producer-Gas Fuel

Replying for the Minister of Mines to a question in the House on April 10, Mr. G. H. Shakespeare said that a uniform price of 90s. a ton delivered anywhere in the country had been arranged for the producer-gas fuel made by two firms. This price might be increased by 7s. 6d. a ton for specially dried fuel.

Mr. F. A. Szarvasy, Chairman of Amalgamated Anthracite Collieries Limited, speaking at the annual meeting of the company on April 16, said that the company's new product, Progasite, the fuel for producer-gas vehicles, was manufactured to a more rigid specification than anything previously prepared in the coal trade, and was distributed in a manner which was unique. The company had adopted the principle of selling this coal to consumers in full truck loads at a common price, were it in Scotland or Cornwall. In this way a similar price factor was given to all users wherever they elected to refuel. It was claimed that on the basis of brake horsepower it cost less than 50 per cent. of the price of petrol.

Progasite is one of the fuels mentioned by Mr. Shakespeare as being sold at 90s. a ton, but this price refers only to orders for one or more truck loads. One large operator in the north was recently quoted 115s. a ton and 122s. 6d. a ton for specially-dried fuel in less than wagon loads, whether Progasite or Suncole.

The Producer-Gas Fuels Committee of the Coal and Carbonisation Industries has asked the British Coal Utilisation Research Association to investigate the factors involved in the national distribution of producer-gas fuel, and the association is seeking the help of garages and commercial vehicle users in order to find precisely what the requirements are likely to be. A comprehensive questionnaire has been circulated, and when these have been completed and the information collated, an endeavour is to be made to have large supplies of fuel available at key points throughout the country, or to adopt such other system of distribution as may be likely to give the maximum of service to gas-producer operators. No retail price has yet been decided, but indications are that it will be about £6 a ton for normal fuels, with an extra charge of about 7s. 6d. for specially dried types.

Indigenous Fuels

The committee set up by the Ministry of Mines to report on the best methods of encouraging and developing the use of home-produced fuels in i.c. engines invites any bodies or individuals having views on the subject to submit suggestions by May 10 to the Joint Secretaries, Committee on Home-Produced Fuels for Internal-Combustion Engines, Metropole Buildings, Northumberland Avenue, London, W.C.2.

Town Gas as Fuel

A network of supply points for the sale of low-pressure town gas to motor vehicles is now in existence throughout Greater London, and at the moment comprises 79 points. The price being charged for the gas is 11d. a therm, plus a small filling charge.

Motor Materials

The Ministry of Transport has announced that manufacturers of motor vehicles, accessories, and components should inform the Society of Motor Manufacturers & Traders, London, S.W.1, if they require steel for the quarters ending September 30 and December 31, 1940, for the construction and maintenance of p.s.v. (excluding trams), goods vehicles, trailers, and private cars. In the case of electric battery vehicles the information is to be sent to the Electric Vehicle Association of Great Britain, London, W.C.2.

London Bus Headlamp Masks

The London Passenger Transport Board announced on February 29 that the new and improved type of headlamp mask, recently approved for adoption on public service vehicles by the Ministry of Home Security, had been fitted on both the nearside and offside headlamps of all the 1,58[illegible] trolleybuses in service. The fitting of the new masks on all the nearside headlamps of the board's 5,200 ordinary buses and coaches was completed on the same day, and the offside lamps, installed at the rate of 1,400 a week, were all in position by March 31. The new masks give the driver a visibility far greater than with the original type, and allow an ample margin for him to pull up his vehicle even if he is travelling in the blackout at 20 m.p.h.

London Bus Visits to Evacuated Children

London Transport is running special Sunday bus trips from London to enable relatives and friends to visit evacuated children. The programme began on Sunday, April 21, with trips to Slough, Little Gaddesden, Aldbury, Wigginton, Tring, the Chalfonts, Berkhampstead, and Chorley Wood. The next trips are scheduled for May 12.

More Railway Horses

At the beginning of this year, the L.M.S.R. had in service 8,268 horses, or over 800 more than in the month before the outbreak of war. This substantial increase represents an addition to the strength to meet the demands of wartime traffic. The company is not relaxing the high standard of physical condition and welfare normally associated with its horses. Some details of the feeding arrangements and the provision for convalescence were given in an article in our issue of December 17, 1937. L.M.S.R. horses are bought when 5-6 years old, from recognised dealers, and work for 6-7 years, so that their average age on leaving the service is about 12 years. They are then sold—mostly to farmers, coal merchants, and small hauliers—but the company is careful to impose a reserve price which prohibits their going to the Continent. During the few months preceding the war, and since the outbreak, the G.W.R. has augmented its horse stud by about 100.

The blacking-out of large stables to enable the stablemen to carry on their duties, which are for the most part performed during the early morning or late evening, has caused some inconvenience. It is well known to those interested in horses that one of the most important requirements for their welfare is an abundance of fresh air in the stable. If the stable doors and windows are entirely covered, the air supply is endangered. However, after improvisations, the requirements of the authorities were met and normal stable conditions maintained. It has not been found possible to provide full protection for the horses against gas attacks, but special precautions have been put into force. These should give the horses a chance of avoiding permanent injury, and also protect human beings and property from panic-stricken or gas-contaminated animals. Every horse going out to work from the larger depots of the G.W.R., for example, has been provided with a nosebag, head-collar or halter, and manger ropes in accordance with the general arrangements of the animal A.R.P. authorities, and instructions have been issued to carmen as to the procedure to be adopted should an air raid occur while they are out at work. Instructions have also been issued to all stations and depots regarding the emergency treatment of gas-contaminated or injured animals, and the method of dealing with gas-contaminated harness and equipment.

The *G.W.R. Magazine* recently recorded that the advantage or otherwise of evacuating all horses from the danger zones was given full consideration before the outbreak of hostilities. While it was found impracticable, owing to the dislocation of staff and the loss of transport efficiency which would inevitably result, to move all the horses from the large depots in London, Birmingham, and elsewhere, immediately war began, suitable "country residences" have been earmarked for the animals should it be deemed necessary at any future time to put an evacuation scheme into operation. There has, of course, been a tendency during the past few months to place any spare or additional horses at country stables rather than at premises in vulnerable areas.

The Problem of Road and Rail Transport

A correspondent discusses General Sir H. Osborne Mance's views as set forth in his recent book

ANYONE who has followed developments in the road and rail issue in this country knows that Sir Osborne Mance has contributed a great deal of his time and wide experience of the subject towards finding a solution of this most difficult problem. His experience was enhanced by his unique opportunity of viewing major transport matters while he was the British director on the board of the German National Railway Company from 1925 to 1930. General Mance's views have always commanded respect; possibly because of the complexity of the road and rail problem, there have been extremely few "outside" observers who have been able to offer assistance during the stormy years of the last decade, and his assistance has therefore been all the more welcome. He has now published a volume* which surveys the problem and includes a commentary on the position immediately before the outbreak of war. As with all his work on the subject, it is a most penetrating analysis, and his observations—admittedly controversial—are stimulating. Sir Arthur Salter introduces the book.

The Independent Expert

Part I is an economic exposé of the problem and Part II contains the author's critical examination. There is throughout a reiterated suggestion that the transport interests have never been able to consider the problem *objectively*, and one gathers that the great need of transport is for the independent expert. The suggestion is one which is attractive, but unfortunately there are few who have the knowledge of the business or could be authorised to commit transport undertakings to a policy which might materially and prejudicially change the economic structure of a concern.

Transport in this country, apart from the public roads for which payments are made for use by those trading on them, has been provided and maintained out of private funds, a position which has its nearest analogy only in the U.S.A., and there incompletely. While that is the position, the conduct of a business cannot be delegated to an outside adviser with no connected responsibility to the proprietors. There are noted instances of men already eminent in other affairs becoming directly associated with the transport industry—one calls to mind Lord Horne and Lord Stamp—and (coupled with those who have spent their lives in the industry) this is probably the only way that practical transport policy can be guided and formulated. Had the Transport Advisory Council been composed of independent experts—as suggested by General Mance—their two (or more) reports might have been more "objective," but it is unlikely that transport policy would have been greatly influenced by them in a practical sense.

Railway Efforts to Secure Road Powers

However, to return to Part I. Discussing railway developments since the great war, General Mance observes that the railways endeavoured to obtain general road powers in 1922. It is not always remembered that the companies made efforts in this direction even earlier. In 1921 the Minister of Transport appointed a committee to inquire whether the railways should be given road powers, and this committee produced three reports. The first was signed by the chairman and two railway representatives recommending that powers should be granted; the second was signed by four representatives of trade, industry, and motor transport recommending that powers should not be granted; and the third, signed by the labour representatives, recommended that powers should not be granted. In the circumstances, it is amusing to note that one of the criticisms levelled at the railways by the Labour Party is that the railways did not make a serious effort to obtain road powers until 1927.

General Mance has much to say about the Salter Report, but there are two points of considerable importance which might be added. In his foreword, Sir Arthur Salter refers to the unanimous recommendations of the conference, but it is not explained that the Government did not accept these recommendations in full nor that the conference stated that "it must not be assumed that if one part was rejected we should remain agreed upon the remainder." As regards the ancillary user, General Mance observes that the conference recommended that no restrictions should be placed upon him other than that he should be restricted from carrying goods for reward. This so far as it goes is correct, but it was added that "It is possible that in the course of the working of this scheme abuses and difficulties may develop in connection with the rights we have retained for the ancillary user which will need to be dealt with by an amendment. Later experience can alone show whether this will be necessary."

The "Square Deal"

On the "square deal" General Mance is vehement. He is clearly not one of its supporters. "The railway companies," he says, "placed themselves on a level with purveyors of sausages or gramophones" instead of a public service! Fancy, he adds, what the public reactions would be if the "square deal" claims had been advanced by a State railway. That, one may interject, is just the point. Had the railways been owned by the State, they would not have needed to ask to be placed on equal competitive terms with their competitors; they would have received fair treatment at once. Mr. Oliver Stanley once said that, if the railways had been nationalised after the great war, there would have been no road and rail problem as we have known it. And we may quote Sir William Wood on the subject from his book, "Railways," published in 1928: "The State, as a railway owner, would hardly build or permit anyone else to build opposition roadways; just as it does not permit any opposition to its business of carrying letters." Sir William's reference to the Post Office is an apt commentary on General Mance's remark that the railway claim for the abolition of the principle of standard rates is in kind the same as if the Post Office were allowed to establish different charges depending on the journey, and varying at their discretion.

Road and Rail Rates

General Mance, however, puts his finger at the root of the difficulties which cropped up on the "square deal" negotiations when he says that "the users, who had enjoyed the best of both worlds under the regime of controlled railway rates and uncontrolled road rates, were alarmed at the prospect of unknown alterations in the railway rates structure." There are some who regretted the

* "The Road and Rail Transport Problem." By Brig.-General Sir H. Osborne Mance. Pitman. 7s. 6d.

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consequent whittling away of the railway claim for equality with their competitors and would have preferred to put the responsibility for rejection of the claim where it belonged—on the Government. But whatever opinion may be held, the war has proved beyond doubt that the sapping of the railways in peacetime—which the railways steadily pointed out in the previous twenty years—was not in the national interest. It is indeed fortunate for the nation that the undermining of the railway machine did not reach its logical but vicious conclusion and that, despite the difficulties, the railway managements still struggled to keep their systems at the highest pitch of efficiency.

Road and Rail Costs

General Mance deals at great length with the problem of road and rail costs. In Part I he shows the fundamental difference between the two. He gives the proportions of the main heads as follow:—

	Railways Per cent.	Roads Per cent.
Running costs	35	60
Fixed charges	40	30
Interest on capital	25	10

The proportions are only broad and they may be taken as roughly representative. In the case of the railways the percentages assume the Standard Revenue to be earned, and it is interesting to see the comparable percentages for 1938, namely, running costs, 39 per cent.; fixed charges, 45 per cent.; interest, 16 per cent. These percentages do show the tremendous economy of rail over road under present conditions if—as General Mance later suggests—running costs are to be the basis of division of function. The difference between the two on an *all-in* cost basis is just as markedly reversed for the reason that road transport pays nothing for the initial provision of its track. On pages 22 and 23 General Mance does not seem to envisage the payment for initial provision; indeed on the next page he seems to question its importance and later refers to highway *expenditure*. Consider the following percentages (they are for the year 1938):—

Costs expressed as a percentage of gross receipts

	Railway Per cent.	Railway-owned road transport Per cent.
Other than track		
Working expenditure	67·47	68·66
Interest on capital	7·51	2·71
	74·98	71·37
Net receipts per cent. of gross receipts	25·02	28·63
Track		
Working expenditure	16·33	
Interest on capital	17·53	12·82*
	33·86	
Deficit	8·84	
Surplus	—	15·81
	100·00	100·00

* Licence and petrol duties

These percentages are based on the figures given in evidence before the Rates Tribunal by the railway companies. The net receipts from the railway, before meeting track costs, are 25·02 per cent. of the gross receipts, compared with 28·63 per cent. for road transport. At this stage there is little difference in the figures, but, when track costs are taken into account, the great difference between the net results of the two methods of transport is at once seen. No less than 17·53 per cent. of gross railway receipts is required for interest on capital spent in providing the rail track and there is no complementary item for road transport.

A Pool of Track Costs

General Mance's solution for getting over this difficulty is to pool track costs and, as already stated, to secure division of function on the basis of the remaining costs. It is an ingenious solution, which he has put forward before, but it is not to be discarded because it is new to transport practice. Assume—though it is a tremendous assumption, for it would require the transformation of the transport industry—that there is a pool of fixed track costs. Where do we get to from there? We have merely inverted an ordinary pooling arrangement, with the apparent addition to the road contribution of a capital charge for the initial provision of the roads, which might have to be serviced, in part, by railway earnings. It would surely require a pool of the remaining costs before an economic division of function could be achieved. What incentive would there be otherwise? There is, for instance, about £300,000,000 of railway capital expenditure which is not attributable to track costs and which would require to be remunerated outside the pool. It would seem that Sir Osborne Mance's scheme (which would require a tremendous upheaval to bring about) could not, in practice, preserve competition but would mean unification, which is the solution Sir Arthur Salter plumps for in his introduction. And where would the capital come from if the interests themselves were to purchase the competitive interest? It could only now be done by an exchange of stock under State ownership.

Position of Branch Lines

However, we must leave this interesting subject, for there is much else to discuss in General Mance's book. He considers branch lines in some detail. "It is possible," he says, "that certain sections of the railway are in fact obsolete and their elimination would be justified and would reduce the average cost of railway working on the remaining lines." It is a pity that the author, like other advocates of this plan in times of peace, confined himself to this general statement and did not state which sections of line he had in mind. It is like a man who writes in and complains about the train services and gives no details! But at least General Mance does give a formula for ascertaining if a section is commercially obsolete or not. He does not, however, ask for a split between variable and non-variable items, nor does he seem to take into account contributory value, or at least his definition is not clear to the present writer, though he expressly points out that the proportion of the receipts on the main lines is not to be included. Perhaps he is wary from past experience and approaches the subject negatively!

Railway Depreciation

On depreciation he says it might be said that a railway consumes up to 45 per cent. of its wasting capital assets without definite provision of a counterpart in full either out of revenue or by writing down capital or by writing up goodwill. This statement is difficult to understand. All railways make annual provisions out of revenue for the complete renewal of the assets which require periodical renewal. Lord Stamp gave some striking figures in his recent speech at the L.M.S.R. annual meeting. He said that in 1939 the company's assets, for which special provision is made, represented £210 million in construction cost, and since 1923 no less than £145 million had been spent on such assets. The simple answer to General Mance's statement is that the railways are maintained as going concerns and, without an Act of Parliament, capital cannot be written down or written up. There was one such Act in Eire, but General Mance's survey of Irish developments does not include it. It may be said, however, that the benefits from the Act are not apparent.

Discussing capital problems, General Mance says that Sir William McLintock suggested, in connection with the Ulster inquiry in 1938, that the State should acquire rail-

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way ordinary shares " in return for part of the railway debt." It is a pity no evidence is given for this statement, for it cannot be traced. It would be interesting to know what railway debt the author has in mind or which State it was suggested should acquire railway ordinary shares.

Pooling

General Mance attaches great importance to a valuation of earnings of the participants in a pool or a scheme of unification. His remarks on pools are interesting and perhaps we may concentrate on these. He seems to have a fear of the alteration of standard proportions for just cause after a pool has begun to function. Why he should have this fear it is difficult to see. On Northern Ireland he says, " the possibility of alteration in the basis of the pool must have contributed to the mutual suspicion which did so much to wreck it." It is hard to appreciate how this could have been important. The causes of the " suspicion " are listed by General Mance from the McLintock report but this is not one of them (in passing we may add that in selecting from the causes given by the McLintock Committee the author has omitted at least one of the major causes—the lack of experience in the board—though he does give the railways' charge that was subsequently accepted by the committee).

On the Northern Ireland pool he remarks " the railways stated that the return of traffic to rail, which had been part of the idea behind the Act, had not been carried out. (This seems to show a misunderstanding of the meaning of a pool.)" If we may suggest it, with all respect, this remark clearly shows that General Mance is not familiar with the Northern Ireland pool, nor with the way one of the partners to it approached the matter. We may quote one sentence from General Mance's own summary of the McLintock conclusions: " The board's policy was to build up an efficient and *self-contained* road transport organisation, whereas a pool implies the working of traffic by the most economical route." There is no similar criticism of the railways.

Road and Railway Rates Structures

Dealing with rate structures and particularly the Transport Advisory Council's reports, General Mance states that there can only be one form of rate structure with co-ordinated transport and that it is not possible to maintain simultaneously a structure based largely on value and a structure based on cost. This statement will be accepted by many in the transport industry and no doubt it will be generally realised as attempts at co-ordination come into practical politics. The abandonment of value in a classification would have tremendous repercussions on the industrial organisation of this country. But that is not to say that it would be fair treatment to leave the railways to struggle on with a classification based largely on value and with stringent regulation of its charging powers against a competitor who is completely free to charge as he likes. General Mance, in various parts of his book, points out the inequity of that.

There are many other points in this interesting book upon which one would have liked to comment, but sufficient has perhaps been said to show its range. The present writer is not able to agree with the whole of it—General Mance himself would not expect that!—but recommends it to the attention of all who are interested in the transport industry and its future.

A. J. P.

Ford Buses in Greece

Part of a fleet of buses on Ford V-8 drop-frame chassis with vacuum-servo braking, for the use of the Hellenic State Railways on the interurban service between Salonika and Cavalla. They were supplied by the Ford Motor Company (Greece) S.A., outside whose premises, in Athens, they are seen

General John Metaxas, the Prime Minister of Greece (in front of radiator), inspecting the vehicles last December in the presence of the Hellenic Minister of Transport and railway officers

One of the original order of eight vehicles with locally-produced bodywork. Since last December several additional buses have been placed in service

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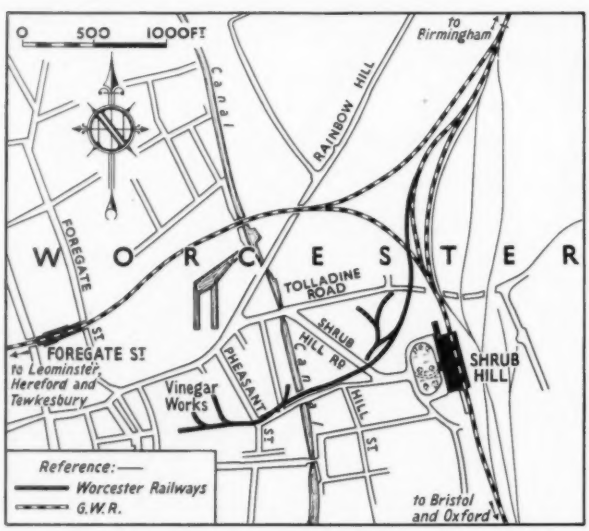
Signalling at Shrub Hill Crossing, Worcester

Railway-type semaphores at a road crossing, maintained under Statutory obligation. Key interlocking is used

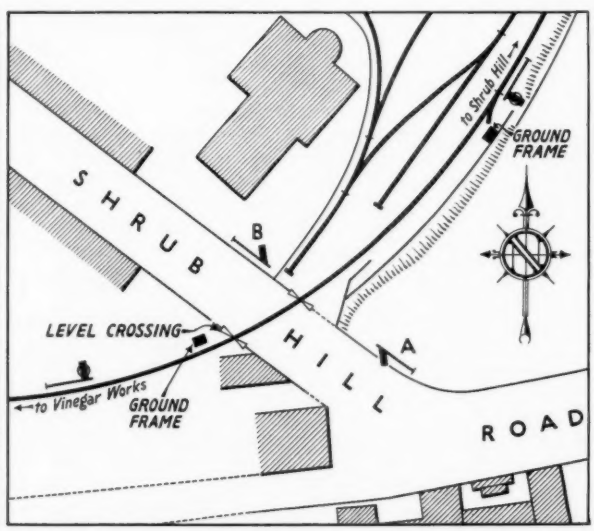
THE Worcester Railway, which is really a short mineral branch line linking the Lowesmoor vinegar works of Hill, Evans & Co. Ltd. with the G.W.R. at Shrub Hill, Worcester, has been mentioned more than once in our columns. So far, however, no details have been given of the signalling at the level crossing at Shrub Hill Road, which is maintained under Statutory obligation. The owning firm was established in 1830 by William Hill and Edward Evans, and 40 years later applied to Parliament for powers to build this railway. The result was the passage on August 1, 1870, of the Worcester Railways Act, which authorised 2 furlongs 9 chains of line, subject to a speed limit of 4 m.p.h., but conferred no powers for the compulsory purchase of land. The line as built is shown on the accompanying sketch map. The undertaking was described in the Act as the Worcester Railways, and the proprietors were named as the partners for the time being in Hill, Evans & Co. The firm has often been called the Worcester Railway Company, but the Act did not incorporate a statutory company. A maintenance agreement regarding the railway was made with the G.W.R. on May 28, 1872, and this still continues to operate. The owning firm was converted into a limited company on May 31, 1900, and this company presumably replaces the old partnership as proprietor of the railway.

G.W.R. locomotive drawing a train on the Worcester Railway across Shrub Hill Road, Worcester. The view shows the former type of road semaphore signals and notice boards

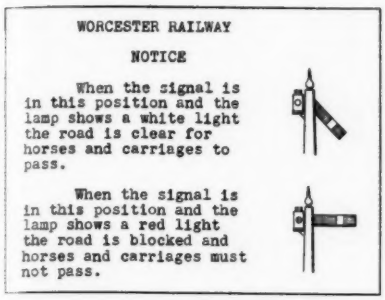
Under the Worcester Railways Act of 1870, the proprietors were obliged to provide signals at the public road crossings to warn road users when trains required to pass across the highway. For many years these consisted of semaphore signals of the type once common, in which the semaphore arm was fitted in a slot cut out of the post. At the Shrub Hill crossing the signals were both placed on the same side of the street with their arms pointing away from the pavement and painted red with a white stripe on both faces, as may be seen from the accompanying illustration. There were no spectacle glasses, and the lamps, which were made to revolve on a vertical spindle in con-



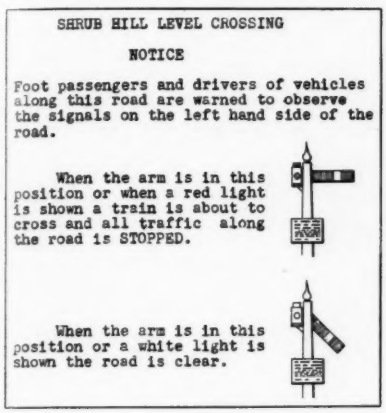
Sketch map showing the relation of the Worcester Railway's undertaking to the G.W.R.



Level crossing and signalling arrangement where the Worcester Railway crosses Shrub Hill


WORCESTER RAILWAY
NOTICE
When the signal is in this position and the lamp shows a white light the road is clear for horses and carriages to pass.
When the signal is in this position and the lamp shows a red light the road is blocked and horses and carriages must not pass.

Two boards as shown alongside, one with arms pointing right, and the other with arms pointing left, were fixed on the old signal at Shrub Hill crossing


SHRUB HILL LEVEL CROSSING
NOTICE
Foot passengers and drivers of vehicles along this road are warned to observe the signals on the left hand side of the road.
When the arm is in this position or when a red light is shown a train is about to cross and all traffic along the road is STOPPED.
When the arm is in this position or a white light is shown the road is clear.

Two boards as shown alongside, one with arms pointing right and the other with arms pointing left, were fixed in the street near Shrub Hill crossing, in rear of the signals

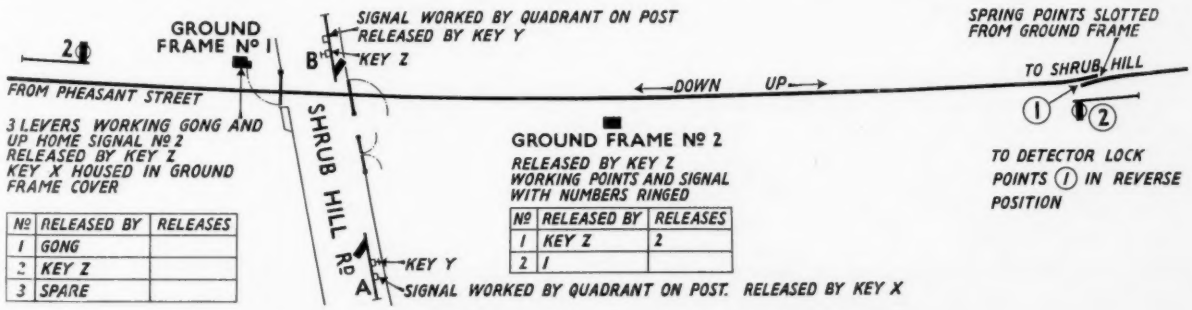
Diagram showing the types of notice boards formerly exhibited at and near Shrub Hill crossing, Worcester

sonance with the signal arms, were fitted with bull's-eye lenses on four faces, presenting the appropriate colour to road traffic corresponding with the position of the arms. The signals were rod worked from a lever nearby, necessitating connections passing beneath the street, which were awkward and expensive to maintain. Notice boards explaining the purpose of these signals were fixed both on the signal posts and also in the street a short distance in the rear thereof. By courtesy of Mr. F. H. D. Page, Signal Engineer, G.W.R., we are enabled to reproduce a sketch showing the general appearance of these boards; the originals are preserved in the signal works at Reading.

A few years ago, when renewals were required, it was decided to abolish the old signal posts and replace them with the G.W.R.'s present neat standard design of tubular post and ordinary lower quadrant signal arm, as seen in the illustration alongside. These are arranged and painted in the usual railway style, the coloured lights showing away from the signal in each case. At the same time the rod connections were abolished and replaced by a key interlocking arrangement, as shown on the diagram, for which also we are indebted to Mr. Page. Each signal is now operated locally by a handle on its up and down road, being normally key locked in the "clear" position. In this condition key Y is locked in the lock on signal A and key Z in the lock on signal B. The initial, or master, key X is normally kept housed in the cover of the ground frame nearest to the roadway, on the Pheasant Street side of the crossing. This frame works a signal controlling railway traffic, to lower which key Z must be inserted in its lock on the frame; on the Shrub Hill side of the crossing is another ground frame, working a trap and a signal, also requiring key Z to be inserted in its lock before the trap can be set for a train to pass. The two railway signals cannot therefore be cleared simultaneously. Succession key locking obtains between keys X, Y, and Z.

When a train requires to cross the road the key X is removed from frame No. 1 and turned in the lock on signal A, allowing it to be put to "danger," backlocking key X and freeing key Y. The latter is then taken to

View looking down Shrub Hill, Worcester, showing G.W.R. type standard semaphore signals controlling street traffic at the crossing of the Worcester vinegar railway branch. Key interlocking is used


GROUND FRAME Nº 1
SIGNAL WORKED BY QUADRANT ON POST
RELEASED BY KEY Y
KEY Z
B
SPRING POINTS SLOTTED FROM GROUND FRAME
TO SHRUB HILL
DOWN
UP
FROM PHEASANT STREET
3 LEVERS WORKING GONG AND UP HOME SIGNAL Nº 2
RELEASED BY KEY Z
KEY X HOUSED IN GROUND FRAME COVER
SHRUB HILL RD
GROUND FRAME Nº 2
RELEASED BY KEY Z
WORKING POINTS AND SIGNAL WITH NUMBERS RINGED
TO DETECTOR LOCK POINTS (1) IN REVERSE POSITION
KEY Y
A
SIGNAL WORKED BY QUADRANT ON POST. RELEASED BY KEY X

Nº	RELEASED BY	RELEASES
1	GONG	
2	KEY Z	
3	SPARE	

Nº	RELEASED BY	RELEASES
1	KEY Z	2
2	1	

Diagram of signalling at railway crossing, Shrub Hill, Worcester

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signal B and inserted in the lock there, allowing that signal to be put to " danger " in turn and freeing key Z. The last-named key is then taken by the trainman and inserted in one of the ground frames which clears the signal, or the signal and catch points (whichever ground frame is used) and key Z becomes locked in. When the movement is finished the signal concerned is put to danger, this again releases key Z which is brought back to signal B, that signal is cleared again, backlocking the key in and freeing key Y once more; this in turn is taken to signal A, which is also cleared, backlocking the key in and freeing key X, which is taken back to frame No. 1. It is thus impossible for any unauthorised person to interfere with the signals.

We understand that, although this use of railway signals is nowadays rarely met with and many members of the public probably fail to understand their significance, it would have been necessary to obtain repeal of the relevant clauses in the original Act of Parliament in order to abolish them at this crossing.

Overseas Notes

Bus Service to the New York World's Fair

The Public Service Interstate Transportation Company proposes to operate daily bus services from Newark, Elizabeth, Plainfield, New Brunswick, and Perth Amboy to the New York World's Fair, which opens on May 11. Last year more than 135,000 persons were transported to the World's Fair in buses of the Public Service organisation.

Chinese Highways

Since the outbreak of the war in China, some 5,700 km. of highways have been built in the interior. The total length of highways in both Chinese China and Japanese-occupied China is now 82,000 km. A fleet of 10,000 lorries is considered by the Chungking Government to be necessary for international trade on the interior highways.

Motorcars by Trans-Australian Railway

Privately-owned motorcars, conveyed on the Trans-Australian Railway by either goods or mixed train, are carried at half rates provided at least two adult passengers travel by the same train or the immediately preceding or following passenger train between the same stations as the car is conveyed. The rate for a car between 15 and 25 cwt. from Port Pirie Junction to Kalgoorlie—the full length of 1,108 miles of the standard-gauge line—is £8 15s. at the concession rate.

£20,000,000 New York Road Tunnel

The United States Government has undertaken to contribute a loan of £14,250,000 towards the cost of a road tunnel under the harbour between Manhattan and Brooklyn. The tunnel will cost £20,000,000. The New York authorities wanted to build a bridge from the Battery, at the tip of Manhattan, to Brooklyn; but the War Department vetoed this plan on the ground that a bridge would impair the defence works of the entrance to New York, as it might some day be a possible target for bombers. The bridge would have cost only half as much as the tunnel, which will take four years to build.

Prosecutions for Irregularities in Eire

While many prosecutions have taken place for the carriage by unlicensed hauliers of merchandise for reward, prosecutions of the parties who entered into agreements with such unlicensed hauliers to carry their traffic outside the scheduled areas to not appear to have been common. On March 20, however, a defendant was charged with the latter offence and was fined £10, against which judgment the defending solicitor gave notice of appeal. The defendant stated he was not aware that the carrier was not licensed to carry merchandise. He employed several carriers and paid the unlicensed the same rate as the others.

New Buses for Buenos Aires

The City of Buenos Aires Transport Corporation has applied to the Control Board for authorisation to buy by public tender 200 new buses, " with a view to bringing this branch of the city's passenger transport facilities up to a standard of comfort and safety commensurate with the size and importance of the Federal Capital." The option is also requested to raise the number to 350, if necessary. It is stated that, when the transport corporation has taken over all the bus companies operating in the metropolis, it will have a total of 1,684 such vehicles under its control, of which, however, only 1,240 are in daily service. After studying the question, the corporation has decided that it would be more economical to buy 350 new buses of modern type, such as were already giving efficient service in Buenos Aires and other large cities, than to spend large sums of money on the repair and reconditioning of existing vehicles, the operating and maintenance costs of which would be unduly high.

Freight Transport in the U.S.S.R.

To relieve the railway situation, endeavours are being made by the Soviet new Commissariat of Automobile Transport to move local freight by means of lorries hauling one or two trailers. It is thought possible that over 2,000 tons a day could be moved by this means in the vicinity of Moscow, resulting in the release of over 200 wagons.

The Stann Creek Railway-to-Road Conversion

The conversion of the Stann Creek Railway, British Honduras, into a highway, which was begun on January 3, 1938, is being pushed forward rapidly and by the end of 1939 17½ miles of road had been completed. It is hoped that the work will be finished by the end of the year. This line—of 3 ft. gauge—which was 25 miles in length, and connected Commerce Bight with Middlesex, in the Stann Creek district of British Honduras, served one of the finest grapefruit-growing areas in the world. In the Road Transport Section of our January 12 issue we gave an illustration of a bridge on the line from which the track had not, at that time, been removed.

Philadelphia Transportation Company

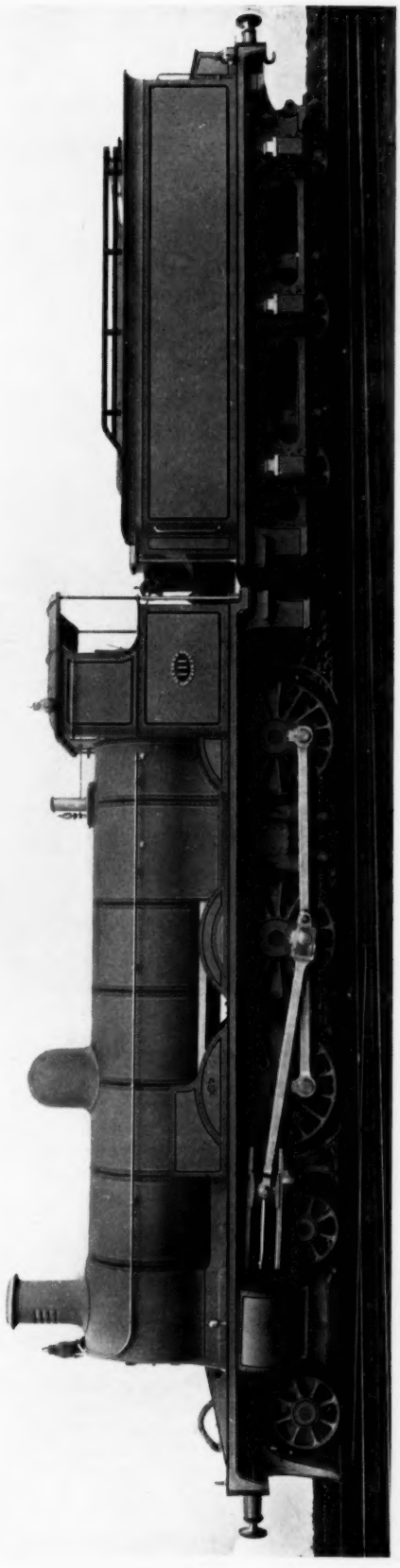
Agreement of consolidation and merger was executed on November 14, by which the Philadelphia Rapid Transit Company was merged, *inter alia*, to form the Philadelphia Transportation Company. The agreement became effective on January 1. The new company operates 97 miles of railway, including elevated and subway lines, and 522 miles of street tramway. The gauges are 5 ft. 2¼ in. and 4 ft. 8½ in., and the rolling stock comprises 2,006 tramcars, and 541 subway-elevated cars. The company also has 454 bus route miles on which run 161 double-deck buses and 227 single-deck buses. The re-organisation plan includes the purchase during the next ten years of 500 new tramcars, 600 petrol buses, and 160 trolleybuses.

Road Transport in Belgium

The position of road transport in Belgium, operating under legal authority or licence on March 31, was as follows :—

	Motorcars	Motorbuses	Lorries
Number of undertakings	651	494	6,857
Number of vehicles	1,352	1,271	10,500
Length of lines worked, km.	—	9,608	—

Of the 6,857 undertakings working goods services, 6,368 are Belgian and 489 are owned by other nationalities. Of the 1,352 motorcars, 642 are also available for service as motorbuses. Motorbuses are reported to be doing good business, especially in the transport of soldiers on leave, although these enjoy half-fare travel. Goods services are also well employed, although it is said that not much margin of profit is available out of the present low tariffs in certain regions, where the usual rate is not more than fr. 2·50 to 3 per km. for 4 to 5 *tonne* loads. A Royal Decree of March 15, 1940, reduces the *taxe de circulation* by nine-tenths for all vehicles using producer-gas, or propelled by steam or electricity. Imports of petrol are now of the order of 20,000 *tonnes* a month, compared with 40,000 to 40,500 *tonnes* before the war, freights having soared from $3 to $188.



One of the Highland Railway "Jones Goods" engines, built by Sharp Stewart & Company in 1894 and just withdrawn from service by the L.M.S.R. These were the first 4–6–0 tender locomotives in the British Isles

THE "JONES GOODS" ENGINES

Now withdrawn from service on the Highland section of the L.M.S.R., these engines, introduced in 1894, were the first of the now universal 4-6-0 type in the British Isles

AS announced in our issue of April 26, the last of the "Jones Goods" locomotives, No. 17925, was recently withdrawn from service by the L.M.S.R. It was the only working survivor of a series of 15 engines designed by the late Mr. David Jones when Locomotive Superintendent of the former Highland Railway, and built by Sharp Stewart & Company in 1894. The accompanying illustration, reproduced from a photograph placed at our disposal by the North British Locomotive Co. Ltd.,* shows engine No. 111 of the series, which originally bore the numbers 103-117. The pioneer of the class, restored to its Highland Railway green livery, is preserved for its historic interest in the L.M.S.R. works at St. Rollox, Glasgow.

The class was introduced for working freight and passenger trains on the heavily graded main line north of Perth, which includes the highest summit on any main line in Britain, 1,484 ft. above sea level, and the engines when built had a dual claim to distinction as being the first to have the 4-6-0 wheel arrangement and ranking as the heaviest main line engines in Great Britain. The design was in all respects a simple and straightforward one, representative of the practice then followed for main line engines in this country, advantage being taken of the extended wheel arrangement to utilise rather larger cylinder and boiler proportions than were then usual.

Steam distribution was effected by means of balanced D slide valves working on vertical faces and actuated by Allan straight link motion between the frames. A feature of interest was the provision of a double chimney in which the outer casing had a series of louvered openings formed in it, the purpose being to increase the draught when the engine was running fast with an early cut-off. All the Jones locomotives of the Highland Railway were thus fitted, and the arrangement also acted as a device for lifting the exhaust steam and the smoke clear of the cab windows. The coupled wheels carried an average weight of only 14 tons an axle and the drivers were flangeless; the driving and trailing coupled springs were compensated. Vacuum brake apparatus was used on the engine and tender, and steam operated sanding gear was provided. The generous cab followed the lines of that planned by Mr. W. Stroudley when Locomotive Superintendent of the Highland Railway. Leading particulars are:—

Cylinders, diam. and stroke	20 in. × 26 in.
Coupled wheels, diam.	5 ft. 3½ in.
Bogie " "	3 ft. 2½ in.
Tender " "	3 ft. 9½ in.
Heating surface, tubes	1,559 sq. ft.
Ditto, firebox	113·5 sq. ft.
Total	1,672·5 sq. ft.
Grate area	22·5 sq. ft.
Working pressure	170 lb. per sq. in.
Tractive force (85 per cent. boiler pressure)	23,660 lb.
Adhesive weight	42·6 tons.
Weight in working order	56·6 tons.
Water capacity of tender	3,000 gal.
Coal " "	5 tons.
Weight of tender full	36 tons.

A statement which appeared when the locomotives had been in service some time set it forth that "the engines have proved themselves capable of hauling trains of 45 to 48 loaded wagons up continuous grades of 1 in 70 and also of running at 60 m.p.h. with passenger trains on favourable stretches." As recently as last summer the last survivors of the class were to be seen piloting heavy passenger expresses out of Inverness, as well as working goods trains.

* Sharp Stewart & Company was incorporated in the North British Locomotive Co. Ltd. in 1903

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British Railways and the War—17

Above: A party of the Auxiliary Military Pioneer Corps building a railway line (with flat-bottom rails) in France This Corps enables men with civil engineering experience to use their peacetime knowledge to further the national war effort

Right: Some of the Pioneers on the footplate of a War Department locomotive

Left: Two of the trains loaded with gas cylinders that are run regularly from various R.A.F. depots to the London suburbs to provide for the needs of the protective balloon barrage over the Metropolis. These trains, which are vacuum-braked throughout and are run at express freight train speeds, consist of 40 12-ton wagons. Every wagon carries a road trailer holding 30 to 36 cylinders of gas

RAILWAY NEWS SECTION

PERSONAL

The War Office announces that the King has approved of the appointment of Lieutenant-General Sir Ronald Charles, K.C.B., C.M.G., D.S.O., retired pay, Colonel Commandant, Royal Engineers, as Chief Royal Engineer of the Corps of Royal Engineers, with effect from April 23, in succession to General Sir Bindon Blood, G.C.B., G.C.V.O., retired pay, who has resigned the appointment. The creation of the office of Chief Royal Engineer in October, 1936, restored to the Royal Engineers an old military appointment, originally styled Chief Engineer of the Kingdom, which had existed from the Restoration down to its abolition in 1802. The holder of the appointment is titular head of the Corps. General Sir Bindon Blood has been associated with the Corps of Royal Engineers since 1860. He is the senior Colonel Commandant of the Corps.

The Rt. Hon. R. S. Hudson, M.P., Minister of Shipping, made a tour of Southampton docks, on April 27, before addressing a meeting at the Guildhall. He was accompanied by Mr. R. P. Biddle, J.P., Docks & Marine Manager, Southern Railway, and Captain J. R. Imrie, Principal Officer of the Ministry of Shipping, Southampton. During his tour, the opportunity was taken by the Minister to meet many of the chief officials of the port as well as Service representatives.

Sir Felix J. C. Pole, Chairman of Associated Electrical Industries Limited, has been appointed President of the Electric Vehicle Association of Great Britain, in succession to the late Colonel R. E. B. Crompton.

G.W.R. Appointments

The following appointments are announced to take effect from April 18 :—

Mr. S. G. Hearn, Divisional Superintendent, Gloucester, to be Assistant to the Superintendent of the Line, Paddington.

Mr. R. H. B. Nicholls, Assistant Divisional Superintendent, Paddington, to be Divisional Superintendent, Gloucester.

Mr. C. W. Powell, Chief Clerk to the Divisional Superintendent, Bristol, to be Assistant Divisional Superintendent, Paddington.

Mr. H. G. W. Gaut, Divisional Superintendent's Office, Bristol, to be Chief Clerk to the Divisional Superintendent.

We regret to record the death on April 28 of Mr. Roger Thomas Smith formerly Electrical Engineer of the Great Western Railway. Mr. Smith, was born in London on March 23, 1863, and was educated at Mill Hill School and University College, London. He served with Hathorn, Davey & Co. of Leeds from 1886 to 1890, first as a pupil and later as an erection charge hand. From 1890 to 1893 he was engaged on the erection and maintenance of machinery in India with Easton, Anderson & Goolden Limited. Returning to England, he devoted some time to an electrical engineering and laboratory course at University College, London, where he was Prizeman in electrical engineering. He was then appointed Resident Engineer, under Sir Alexander Kennedy, to the Westminster Electric Supply Corporation, and from 1895 to 1898 was Technical Manager for the Imperial Continental Gas Association of La Cie. Hydro-Electrique Anversoise, supplying Antwerp with hydraulic and electric power. In 1898 he joined Sir Alexander Kennedy's staff as an assistant concerned with surveys and preliminary designs for electric supply schemes, railways, and tramways. He was associated with the L.C.C. tramway electrification, and later went to Buenos Aires in connection with the city electric tramway scheme and the design of the generating station. He was then placed in charge of electric railway, power, and lighting developments for the Great Western Railway, and in 1905 joined the Great Western Railway Company as its Electrical Engineer. In that position he was responsible for the supply of electricity for traction, power, and lighting in the London district, including generating station and other works, as well as the electrical plant generally. He was also Electrical Engineer for the Ealing & Shepherd's Bush Railway, and designed and carried out the sub-station machinery, electrical distribution, and equipment for connecting the Central London Railway with Ealing. He resigned from the G.W.R. in 1924 and became a partner in the firm of Messrs. Highfield & Roger Smith, consulting engineers. Mr. Smith was President of the Institution of Electrical Engineers for 1919–20. He was awarded the George Stephenson Gold Medal for a paper on "Electric Train Lighting," read before the Institution of Civil Engineers in 1911. He represented the Railway Executive Committee (of the 1914–19 war) as a witness before the Board of Trade Electric Power Supply Committee in 1917, and was concerned with various bodies as a representative of the railway companies. Mr. Smith was President of the British Section of the Société des Ingénieurs Civils de France in 1923, and President of the Institute of Transport in 1927.

Elliott] *[& Fry*

The late Mr. Roger T. Smith

Electrical Engineer, Great Western Railway, 1905–1924

Mr. J. S. Harper, District Superintendent, Hull, L.N.E.R., who, as announced in our issue of April 26, is retiring on May 18, entered the service of the North Eastern Railway as a junior clerk at Northallerton in 1897. After experience at a number of stations he was appointed relief stationmaster, and in 1905 was transferred to the General Superintendent's Office at York. In 1912 he was appointed Yardmaster at Hull East, and was subsequently transferred to a similar position at Hull West. Early in 1915 he received a commission in the Royal Engineers, and was made Assistant Traffic Manager at Woolwich Arsenal, later becoming Traffic Manager there, with the rank of Captain. In 1919 he returned to the service of the North Eastern Railway

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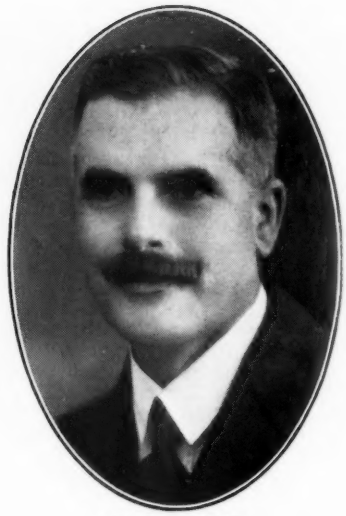
Mr. J. S. Harper

District Superintendent, Hull, London & North Eastern Railway, 1927-1940

Mr. L. Ballan

Appointed District Superintendent, Hull, London & North Eastern Railway



Mr. R. C. Miller

Appointed Electrical Engineer, Docks & Marine Department, Southampton Docks, Southern Railway

at Hull. Twelve months later he was appointed District Superintendent at Darlington, and in October, 1927, became District Superintendent at Hull. In addition to the railway side, the District Superintendent is responsible for the whole of the dock operating work of the third port. Mr. Harper is the son of Mr. J. B. Harper who died in 1936 and is still well remembered in the North Eastern Area. He was Assistant Superintendent of the former North Eastern Railway from 1912 to 1922.

Mr. L. Ballan who, as announced in our issue of April 26, has been appointed District Superintendent, Hull, L.N.E.R., in succession to Mr. J. S. Harper, who is retiring on May 18, was engaged between 1909 and 1915 in the service of the former North Eastern Railway in the Hull District and the Hartlepools, where he gained experience in various sections of the Goods Commercial and Operating Departments. In 1915, Mr. Ballan joined the Inns of Court Officers Training Corps, and was transferred in 1916 to the Manchester Regiment and in 1917 to the Docks Directorate at Calais. From 1919-20 he was employed in the Divisional Goods Manager's office at Hull on special duties, chiefly in connection with coastwise shipping, and was transferred to West Hartlepool in 1920 as Assistant Yard Master. From 1921 to 1923 Mr. Ballan was Chief Clerk (Railway) in the Divisional Goods Manager's Office at Hull, and in 1923 went to Newcastle as Assistant District Goods Manager, L.N.E.R. Later in the same year he took up the new joint Commercial and Operating Department position of Mineral Traffic Controller at Hull. From 1924 to 1926 he was employed in the Trains Section of the Superintendent's Office, York, and from 1926 to 1931 was Assistant to Superintendent (Trains), with general supervision of passenger and freight train working and organisation in the North Eastern Area at York. He was appointed District Superintendent, Sunderland, in August, 1931, and from here he is now being transferred to Hull.

Mr. Reginald C. Miller, formerly Deputy to the Electrical Engineer, Docks & Marine Department, Southern Railway, has been appointed Electrical Engineer of that department in succession to Mr. Wauchope whose death we announced in our issue of March 8. Mr. Miller joined the staff of the London & South Western Railway in 1911 as a junior electrical assistant in the Electrical Engineer's Department, South-

Mr. R. H. B. Nicholls

Appointed Divisional Superintendent, Gloucester, Great Western Railway

Mr. S. G. Hearn

Appointed an Assistant to the Superintendent of the Line, Great Western Railway

The late Mr. Douglas Hamilton

Deputy Head of the Rates Office, London Midland & Scottish Railway

ampton, and in subsequent years was identified with various large enterprises. In 1924 he was engaged on the conversion of all the pumping stations in Southampton docks from steam to electric drive, and later with the electrical work in connection with the King George V graving dock and the supply of electrical power to the whole of the new dock estate.

Mr. R. H. B. Nicholls, Assistant Divisional Superintendent, Paddington, Great Western Railway, has been appointed Divisional Superintendent, Gloucester. Mr. Nicholls entered the company's service in the General Manager's Office in 1919, immediately after being demobilised from the Army. Two years later he was transferred to the Divisional Superintendent's Office at Paddington, and in 1925 to the Office of the Superintendent of the Line as a passenger train runner. In 1926, Mr. Nicholls represented the Great Western Railway at the Baltimore & Ohio Exhibition at Baltimore, and subsequently took up duty in the company's New York office. In 1932 he was appointed Chief Clerk to the Divisional Superintendent at Gloucester, and in December, 1934, became Assistant Divisional Superintendent at Cardiff. Mr. Nicholls was made Assistant Divisional Superintendent, Paddington, in October, 1937, the position he now relinquishes to take up his new appointment as Divisional Superintendent, Gloucester.

Mr. S. G. Hearn, A.M.Inst.T., Divisional Superintendent, Gloucester, Great Western Railway, has been appointed an Assistant to the Superintendent of the Line. Mr. Hearn joined the company's service at Plymouth in 1911, and apart from four years with the Royal Engineers (Signals) during the war in France, Belgium, and Germany, was employed at various stations in the Plymouth Division until 1921. In that year Mr. Hearn was selected for the company's special training scheme, being the first Traffic Department clerk to be so chosen. He received facilities for obtaining additional experience in the Goods, Traffic, and Docks Departments. His training period over, Mr. Hearn served for three years on the personal staff of the General Manager. In January, 1928, he took up special duties in the Office of the Superintendent of the Line, where he remained until his appointment as Junior Assistant to the Divisional Superintendent at Newport in March, 1930. Mr. Hearn was transferred to the Worcester Division as Chief Clerk to the Divisional Superintendent in July, 1933, and in October, 1936, was made Assistant Divisional Superintendent at Newport. In December, 1938, he was appointed Divisional Superintendent, Gloucester, the position he now vacates to take up his new appointment at Paddington. Mr. Hearn won the G.W.R. (London) Lecture & Debating Society's Prize Essay Competition, 1928-9, on the subject "How should the railway companies avail themselves of their newly-acquired road powers."

We regret to record the death of Mr. Douglas Hamilton who was Deputy Head of the Rates Office of the London Midland & Scottish Railway. Mr. Hamilton entered the service of the London & North Western Railway in the Northampton District in 1895 and, after experience at Oxford and other stations, was transferred to the District Manager's Office at Northampton. He was transferred to the L.N.W.R. Rates Office at Euston in 1904 and became Assistant Chief Clerk, Rates Office, L.M.S.R., in 1928. In 1934 he became Chief Clerk of the Centralised Rates Office and Deputy Head in 1938. Mr. Hamilton was the representative of the L.M.S.R. at the Railway Clearing House meetings dealing with matters affecting rates and charges for merchandise traffic and in this capacity met representatives of the other railway companies and also those of coastwise shipping companies and canal carriers. He was from time to time appointed to serve on internal L.M.S.R. committees dealing with problems on which he was a recognised authority.

Mr. H. Branton has been appointed Assistant Electrical Engineer (Neasden), London Passenger Transport Board, in succession to the late Mr. S. W. Corns. He has been made an officer of the board. Mr. Branton joined the Metropolitan Railway Company in March, 1930, as Assistant Resident Engineer at Neasden generating station. For twelve years he had been with the Northampton Electric Light & Power Company, where he began as Charge Engineer, and was afterward, for eight years, Assistant to the Works Superintendent at Hardingstone generating station. His technical training was received at the Hull School of Technology, and his practical experience was obtained with Hull Corporation, Bradford Corporation, Cleckheaton District Council, G. & T. Earle (Hull) Ltd., and Sunderland Corporation. In January, 1933, Mr. Branton was appointed Resident Engineer at Neasden generating station.

INSTITUTE OF TRANSPORT, METROPOLITAN GRADUATE & STUDENT SOCIETY

The officers and committee of the society for the 1940–41 session are as follow: Mr. Charles F. Klapper (Chairman); Messrs. D. W. Aldred and A. W. Satchell (Vice-Chairman); Mr. C. F. King (Hon. Secretary); Mr. W. G. Coles (Hon. Treasurer); Mr. C. A. Butts (Hon. Auditor); Messrs. M. C. Munton, E. T. Cumber, J. A. R. Turner, S. A. Carter, S. B. Budworth, D. Wilding, E. R. Wollatt, C. E. Aldred, H. F. C. Adcock, W. G. Wheable, J. E. Skegg, F. A. West, H. Emery, A. R. Parselle, F. G. Spindler (Committee).

Mr. Geoffrey Shakespeare, M.P., Secretary of the Department of Overseas Trade, has appointed Mr. G. B. Blaker to be his Private Secretary. Mr. N. A. Beechman, M.C., M.P., has been appointed Parliamentary Private Secretary (unpaid) in the temporary absence of Mr. G. A. V. Duckworth, M.P., who is serving with His Majesty's Forces.

Mr. Francis Charles Buller, the Estate Agent of the London Passenger Transport Board, is due for retirement after 27 years of service, but his services are being retained temporarily in connection with rating matters. Mr. Buller joined the Underground group as Estates Manager in 1913 from Messrs. Vigers & Company, the chartered surveyors, where he was Assistant to the late Mr. Leslie Vigers. He soon earned distinction by his all-round capacity in estates management and was made Estate Agent and an officer in 1921. In 1935 he became a principal officer. Mr. Buller's duties have included the management of the board's several thousand ancillary properties and other sources of auxiliary revenue such as stalls and automatic machines on stations. He has been responsible also for the acquisition of all properties needed by the board for the purposes of its undertaking and for matters appertaining to rating and taxation and questions of town planning. He is a fellow of the Institute of Chartered Surveyors, a member of the Rating Surveyors' Association and last year was Chairman of both the Railway Estate Agents' Conference and the Association of Railway Rating Surveyors.

Mr. A. T. Hobbs, M.Inst.C.E., has resigned his appointment as Secretary of the Diesel Engine Users Association.

Mr. J. S. Wills has been appointed Managing Director of Great Western & Southern Air Lines Limited.

Mr. L. G. Wyndham Shire, Chief Engineer to the Birmingham & Midland Motor Omnibus Co. Ltd. is shortly relinquishing that position. His successor is to be Mr. Donald M. Sinclair, Assistant Engineer of the Northern General Transport Co. Ltd.

Forthcoming Events

May 7 (*Tues.*).—London School of Economics, at Canterbury Hall, Cartwright Gardens, W.C.1, 5 p.m. "The problem of railway charges (3)," by Mr. Roger Gibb.

May 8 (*Wed.*).—Permanent Way Institution (London), at Albert Stanley Inst., Fulham Palace Road, Hammersmith, 7 p.m. "Electric arc-welding of structures on the railways of London Transport," by Mr. H. W. Clark.

May 9 (*Thurs.*).—Institution of Electrical Engineers, Savoy Place, London, W.C.2, 6 p.m. Annual general meeting.

May 14 (*Tues.*).—Institution of Civil Engineers, Great George Street, London, S.W.1, 5.30 p.m. "Cliff stabilisation works in London Clay," by Mr. J. Duvivier.

May 23 (*Thurs.*).—Model Railway Club, at St. John's Schools, Tottenham Court Road, London, W.1, 7.30 p.m. "The past 40 years in retrospect," by Mr. Charles E. Lee.

May 24 (*Fri.*).—Past and Present Crewe Pupils and Premium Apprentices at Oddenino's Hotel, Regent Street, London, W.1, 7.15 for 7.45 p.m. Annual dinner. Chairman, Sir Nigel Gresley.

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TRANSPORT SERVICES AND THE WAR—36

General Szlumper's broadcast—R.E.C. "goodwill" posters — Calculating increased charges—Exceptional L.N.E.R. loads—Resumption of Cumberland passenger services—Railway conditions in Germany—The war and Scandinavia

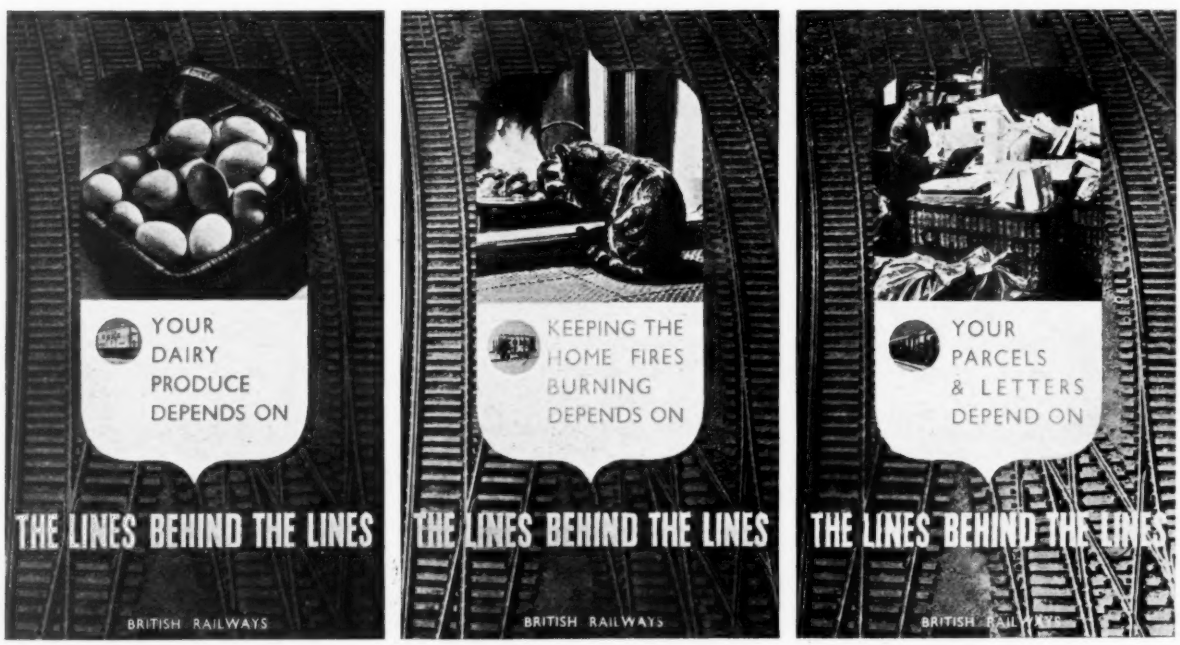
A fascinating popular story was told on the radio on Monday evening in the course of the talk in the Home Service programme of the B.B.C. entitled "Troop Trains: The Story of an Army on the Move" broadcast by Major-General Gilbert S. Szlumper. While he revealed no new details of the work of his Department, he succeeded in conveying to the lay audience something of the magnitude and importance of the tasks of railways in wartime. After stating that in the last world war he was Secretary of the Railway Executive Committee—the committee that was responsible for seeing that the railways of this country carried out the many requirements of the Government, he observed that in this war, as Director-General of Transportation & Movements, it was his job to find out the transport requirements of the Army and to ask the railways to carry them out. Although, broadly speaking, the transport problems attaching to any war were akin to those of previous wars, the details which formed the ingredients of the problem were very different, and the fact that in this war the Army was highly mechanised made a lot of difference to transport. Instead of horses, which could be led into the trains and ships, there was an astounding variety of tanks, tractors, lorries, troop-carrying vehicles, Bren gun carriers, cars, and travelling workshops. These were inanimate things which required special ships for their transport, and special gear for getting them on and off the ships.

New munition factories, new supply and ammunition depots, and other warlike establishments had been constructed, most of them equipped with railway facilities and shunting yards installed by the home railways to plans agreed with the War Office; officers had been trained to co-ordinate and control military traffic; stevedore battalions and docks units had been raised and trained to handle the traffic at the ports overseas; railway survey and construction companies had been formed to lay many miles of railway in the base depots and to increase rail facilities between the depots and the railheads to enable the daily load to be handled; railway operating units—composed of drivers, firemen and guards—had been recruited to work the trains; and workshop units—of fitters, boiler-makers, etc.—had been formed to repair the locomotives and wagons overseas. In the theatre of war, existing facilities had been supplemented by strategic railways to enable rapid troop concentrations to be achieved. The last war, he said, had shown that the date of an offensive was governed by the date of completion of the railway construction programme which enabled supplies to be produced for it. He paid high tribute to the efficiency and helpfulness of the French railways in all matters concerning British Army transport.

At the end of the first four months of the war a statement was made by the Minister of Supply that he had placed contracts for 234 million pounds' worth of munitions, etc., since the war began; that our output of shells was then 10 times what it was at the end of 1914; that gun production had, in some cases, increased by 8 times what it was when the war started; that the Government had put in hand 20 new ordnance factories and had extended the factories of 300 contractors since the war started. Every item entailed a demand on transport. If the Railway Executive Committee wished, it could provide many astronomical figures in connection with Government traffic, and could easily prove that the British railways were efficiently performing a Herculean task on top of their other manifold activities.

"The Lines Behind the Lines"

A new series of goodwill posters authorised by the Railway Executive Committee made its appearance on railway stations on May 1. These posters are designed on a more compre-


YOUR DAIRY PRODUCE DEPENDS ON
THE LINES BEHIND THE LINES
BRITISH RAILWAYS
KEEPING THE HOME FIRES BURNING DEPENDS ON
THE LINES BEHIND THE LINES
BRITISH RAILWAYS
YOUR PARCELS & LETTERS DEPEND ON
THE LINES BEHIND THE LINES
BRITISH RAILWAYS

Three of the new series of Railway Executive Committee goodwill posters

hensive and intimate scale than those previously issued by the British railways since the outbreak of war. They are intended primarily to appeal to the housewife, and for that reason the subjects embrace eggs, meat, milk, fruit, parcels, and coal. The idea presented by the posters, of which there are six, is the success of the " Lines Behind the Lines " in feeding, clothing, and heating the nation ; carrying out their vital functions under great stress, but with the success reflected day by day at our tables and in the provision of requirements which are often taken for granted. The ground colour motif of these posters is a rich amber on a background of railway lines in blue or green. Superimposed are photographs of the subjects it is desired to stress and the words " Your fruit supplies [dairy produce, etc.] depend on the Lines behind the Lines."

In the current issue of the *L.N.E.R. Magazine* is given the story behind the posters. It is stated that the scheme was evolved and executed by the L.N.E.R. Advertising Manager on behalf of the Railway Executive Committee, which has endeavoured to remind the public of the vital nature of rail transport services. It was decided to produce a series of pictorial bills to bring home the truth that, without railway communication, the home front, no less than the fighting fronts, would be in jeopardy. In analysing the proposition, the immensity of railway traffic was apparent ; 166,000,000 tons of coal, nearly 1,000,000 tons of potatoes, thousands of gallons of milk, were among a year's traffic. A picture of railway lines was chosen as the basis of the poster, bringing together the idea of lines at home and lines of defence at the front—" the lines behind the lines " became the slogan.

L.M.S.R. Anti-Waste Campaign

A salvage drive, which has been initiated by Lord Stamp throughout the L.M.S.R. system in collaboration with the Government Controller of Salvage, is believed to be the largest ever undertaken by a commercial firm. Lord Stamp has addressed a personal message to every one of the 220,000 employees of the L.M.S.R. urging them to practice rigid economy in the use of stores and to recover the maximum amount of waste possible. At the 2,400 passenger stations and 2,900 goods depots, at marshalling yards, and at engineering depots, receptacles are being provided for the collection of usable waste. Central dumps are being established to facilitate accumulation and sorting, and to provide an easy channel for disposal. A special committee composed of representatives of every department, working under a newly-appointed Salvage Officer (Mr. W. H. Vine) will co-ordinate the all-line effort.

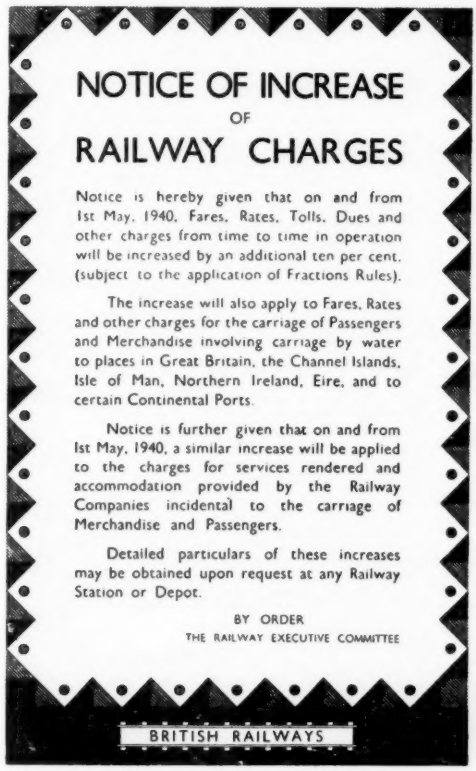
The campaign is not being confined to railway staff. Every year 434,000,000 passengers travel on the L.M.S.R. system, and, by means of posters to be displayed at the stations, this army of potential " savers of salvage " is being urged to help the campaign. Additional receptacles for scrap are being provided at the stations.

A request for suggestions from the staff in the salvage of useful material has already had good results. Iron railings round railway houses and other properties are being removed ; in all canteens regular " bone collecting "—under the spur of the slogan " 20 lb. of bones can fire an 18 pounder "—is producing excellent results ; and consideration is being given to cutting down line-side trees that are suitable to augment the country's timber supplies. Anti-freeze mixture, of which the L.M.S.R. uses 2,000 gal. a year, is to be saved at the end of the winter by a process of filtration and separation and used again next year.

Calculating Increased Charges

Statutory Rules & Orders No. 586 of the Emergency Powers (Defence) Series, under which the 10 per cent. advance in railway rates, fares, and charges, was made effective from May 1, states that the additional charges authorised are not to be made in addition to any charge of which the amount has been determined by an agreement made before the coming into force of the Order between any of the railway companies and any trader in accordance with the provisions of section 37 of the Road & Rail Traffic Act, 1933, so long as that agreement remains in force. The effect of this proviso is to preclude from the incidence of the additional 10 per cent. agreed charges for the period the agreement has to run. So far as future agreed charges are concerned, it is understood that it will be the practice to incorporate in the agreement a clause making those charges subject to any variation in the level of rates authorised or ordered by the Minister of Transport.

The schedule to the Order gives the manner in which the additional charges are to be applied and the various fraction


NOTICE OF INCREASE
OF
RAILWAY CHARGES
Notice is hereby given that on and from 1st May, 1940, Fares, Rates, Tolls, Dues and other charges from time to time in operation will be increased by an additional ten per cent. (subject to the application of Fractions Rules).
The increase will also apply to Fares, Rates and other charges for the carriage of Passengers and Merchandise involving carriage by water to places in Great Britain, the Channel Islands, Isle of Man, Northern Ireland, Eire, and to certain Continental Ports.
Notice is further given that on and from 1st May, 1940, a similar increase will be applied to the charges for services rendered and accommodation provided by the Railway Companies incidental to the carriage of Merchandise and Passengers.
Detailed particulars of these increases may be obtained upon request at any Railway Station or Depot.
BY ORDER
THE RAILWAY EXECUTIVE COMMITTEE
BRITISH RAILWAYS

The official R.E.C. poster notice of the increase in railway charges from May 1

rules which shall relate to the various charges. Generally, in determining the amount of the additional charge, fractions of 1d. if less than one-half are to be dropped, if one-half or more to be charged as 1d. In the case of agreed charges and also workmen's tickets (except on the L.P.T.B. railways other than the Metropolitan) fractions less than one-quarter are to be dropped, from one-quarter to three-quarters charged as ½d., and three-quarters or over charged as 1d. In the case of ordinary season tickets, fractions of 1s. will be charged as 1s. in the rates for 12-month tickets ; for shorter periods fractions of 3d. will be charged as 3d., except in the case of weekly season tickets where the general rule will apply. For traders' season tickets fractions of 1s. will be charged as 1s.

The G.W.R. Emergency Headquarters

In view of the grave international situation last summer, the G.W.R. decided that accommodation should be provided, well away from London, for the company's headquarters staff. A site adjoining Aldermaston station having been decided upon, contracts were let in July, 1939, for the construction of three steel-framed and brick-panelled buildings, two 200 ft. by 80 ft., and one 100 ft. by 80 ft. Some weeks later these contracts were doubled. Work on the foundations was begun early in August, and the first of the structures was occupied by staff on December 18. All the buildings were completed in February and are now all in use. In the interim, from the outbreak of war, accommodation for the greater part of the staff was found in country houses, in restaurant cars stabled in sidings, and in rooms and buildings away from London that were vacant or could

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without delay be vacated. Some of these have already been illustrated in THE RAILWAY GAZETTE, notably in our issues of December 1, 1939 (page 710), March 1 (page 298), and March 15 (page 382). These arrangements met immediate needs, but the more permanent accommodation now in use provides much better working facilities, with less dispersal of departments and with improved contact between the various sections of each department.

The six buildings which comprise the new headquarters are adjacent one to another and within easy walking distance of the station. The walls of the buildings are constructed of Hunziker flint bricks; the roofs are of corrugated asbestos sheeting on a lining of $\frac{7}{8}$ in. boarding, with reinforced patent glazing as top lighting; and the floors are of concrete covered with linoleum. All the five office sheds have lavatory blocks for male and female staff, and each shed has been partitioned in a manner suitable to the department occupying it. The total number of departments accommodated will be twelve. The buildings were designed with an eye to the future, and can be adapted for use as factory buildings using lightweight machinery. Each building has an independent hot water heating system, with Classic type wall-radiators, served from a boiler house at the end of the building. The heating units are Britannia sectional boilers, and the gravity circulation is amplified by booster electric pumps. Large roller blinds are provided for blacking-out roof lights and side windows. The new furnishings have been provided by the company's Stores Department, which has turned out a large quantity of trestle tables, racks, and shelving. This has been supplemented by the removal of certain office equipment from Paddington.

For use as a staff canteen capable of seating 400 persons, one of the 100 ft. by 80 ft. buildings has been adapted. At one end of the canteen is a kitchen equipped to cook for the total staff at the headquarters. The equipment consists of a six-oven Crittall range, fish-fryer, steaming ovens, steamers, electric grill and dough mixer, potato peeler, slicing machine, and refrigerators. The service counter in the canteen proper is a series of steam hot-plate units and is fitted with two Still's tea and coffee boilers. The whole of the steam for the kitchen and hot plates, sinks, etc., is supplied from a vertical steam boiler, working at 20 lb. per sq. in. pressure, and the hot water is supplied from a calorifier heated by steam from the vertical steam boiler. The canteen is run on the cafeteria principle. Near the food-serving counter is a bar, where beers, minerals, etc., are purchasable. The principal cooking staff is provided from the restaurant car personnel, but this is being supplemented and replaced as necessary by local female labour. Lunches are served daily between 12 noon and 2 p.m., and staffs are continually employed in removing trays and used dishes.

The water supply at the wartime headquarters is derived from a 6-in. borehole 185 ft. 6 in. deep, penetrating about 58 ft. in the chalk underlying the London clay soil. The water rose in the bore and overflowed under artesian action. The bore was capped and a $2\frac{1}{2}$ h.p. electric motor is used to drive a direct-coupled $2\frac{1}{2}$ in. automatically-controlled centrifugal pump of 5,000 gal. an hour capacity, which lifts the water to a 4,500 gal. pressed-steel storage tank 25 ft. high. Due to the flatness of the site, the question of main drainage and sewage disposal needed special consideration, and it was found necessary to separate the filter beds from the collecting tanks. The whole of the draining, except surface water, is led from each of the sheds to a centrally disposed septic tank, constructed in two units, whence it is pumped by two 4 in. centrifugal pumps actuated by 4 h.p. vertical spindle squirrel cage electric motors with automatic switch control, along a 4 in. cast-iron main to the dosing chambers, some 300 yd. away. These are syphoned to two rotary distributors, which sprinkle over two 34 ft. 6 in. dia. clinker filter beds, and the effluent after filtration is discharged into an arm of the adjacent canal.

Beenham Grange, which is about $1\frac{1}{2}$ miles away, and has also been adapted for use as an emergency headquarters, is being retained in that capacity. The accommodation in the house was sufficient for only about 50 staff, so two timber huts, each 142 ft. by 32 ft., were constructed in the grounds, thus providing space for a further 150 to 200. The heating of these huts is by Courtier stoves, and there is electric light. The old stables of the Grange were converted into lavatory blocks for male and female staff. Catering arrangements were covered by the conversion of the existing kitchen quarters of the house and the provision there of a new Esse cooker, electric hot plate, refrigerators, and sinks. A 58 ft. by 32 ft. timber structure was built adjoining the house for use as a canteen, and this accommodates eighty at a sitting. Although the existing bore hole was found capable of providing a sufficient water supply, the pump and tank storage were inadequate. A new pumping main was therefore installed and connected to a 2 in. centrifugal pump direct-coupled to an electric motor, which lifted the water to a new 2,200 gal. pressed-steel tank on 30 ft. steel trestling. The existing drainage system was inadequate to the new conditions, and a new main system and disposal plant was provided, similar in general to that at the Aldermaston huts.

Much of the work on the new headquarters was carried out under war conditions; shortage of labour and materials prevented the job being finished as quickly as was at first expected. The construction and fitting up of the buildings was designed and carried out under the direction of the Chief Engineer, and the Resident Engineer in charge of the work was Mr. J. V. Franklin.

Exceptional L.N.E.R. Loads

Official information is now available concerning some of the exceptional loads which have been hauled by locomotives of the L.N.E.R. since the curtailment of the King's Cross, Leeds, and Newcastle passenger services on February 26. The record appears to be held by the 10.45 a.m. from Newcastle to King's Cross on Sunday, March 31, which from Peterborough was made up to 26 vehicles weighing 762 tons tare. The train was worked up without assistance by "V2" 2-6-2 No. 4800, with a loss of 10 min. on schedule, which would mean an average speed of 44·9 m.p.h. Relatively a finer performance was that of "A1" Pacific No. 2549, which on Friday, April 5, worked the 1.55 p.m. express from Leeds to King's Cross forward from Grantham with a load of 23 vehicles, or 718 tons tare; at Peterborough this was made up to 24 vehicles, 759 tons tare, but the loss on schedule was only 2 min., and the average speed from Peterborough to King's Cross was 47·8 m.p.h. On the same day the 1 p.m. from King's Cross was worked throughout from King's Cross to Newcastle with "A4" streamlined Pacific No. 2509, *Silver Link*, and as far as Darlington the load was 25 vehicles, 750 tons tare. At Darlington a six-wheeler was detached, and the load for the remaining 36 miles was 734 tare tons. On this occasion the engine lost 15 min. on schedule on the through journey. As all these trains had every seat occupied, and some passengers standing, together with large quantities of luggage, it may be assumed that an addition of at least 10 per cent. to the tare weights is necessary to arrive at the total load hauled, which must have been at least 825 to 840 tons. On the 25-coach run of the 1 p.m. down the engine on starting was out of sight in the Gasworks tunnel outside King's Cross, and special measures had to be taken to give the driver the right-away.

Throughout the weeks that elapsed between the curtailment of the L.N.E.R. service on February 26 and the bringing into operation of daily relief trains to the 10 a.m. and 1 p.m. and 10.15 p.m. down and corresponding up services, loads of 20 coaches were common, and 21 and 22 vehicles were not infrequent, especially on the up Flying Scotsman. On one such journey, with a 20-coach load weighing 625 tons tare, and 700 tons gross (there were roughly 150 standing passengers and a total of over 900), "A1" locomotives gained 16 min. in running between York and King's Cross. No. 2576, *The White Knight*, worked the train from York to Grantham, the 32·2 miles from York to Doncaster, including Selby slack, taking 41 min., or 40 min. net (schedule 44 min.), and from Doncaster to a stop outside Grantham the time taken was 60 min. 2 sec., equivalent to a start-to-stop time of 61 min. over the 50·5 miles from Doncaster to Grantham (schedule 63 min.). At Grantham No. 2545, *Diamond Jubilee*, was substituted for No. 2576, and ran to a stop outside Peterborough (after a long signal slowing) in 35 min. 8 sec.; this was equivalent to a start-to-stop time of 35 min. (schedule 39 min.) for the 29·1 miles from Grantham to Peterborough.

Finally, from Peterborough No. 2545 passed Huntingdon, 17·5 miles, in 22 min. 13 sec.; Hitchin, 44·5 miles, in 50 min. 58 sec., Hatfield, 58·7 miles, in 68 min. 5 sec., and Wood Green, 71·4 miles, in 80 min. 43 sec.; there was a further signal check outside King's Cross, but the terminus was reached in 89 min. 10 sec., or 88 min. net (schedule 94 min.). An average speed of 55·1 m.p.h. was maintained over the 66·9 miles from Holme to Finsbury Park. Up lengthy stretches of 1 in 200 gradient the minimum speeds were 38 m.p.h. at Markham, 43 at Peascliffe tunnel, 44 at Abbott's Ripton, and 38 at Stevenage; up the 1 in 200 from Grantham start, with rear-end assistance out of the platform, the attained speed was 32½ m.p.h. at Stoke summit. On falling gradients speed was allowed to reach 70 m.p.h. or slightly over, and on the level the maintained speed was mostly between 57 and 60 m.p.h. Unfortunately the station delays were considerable; there was a 6-min. stop for signals outside Grantham, after which the engine took 4 min. of setting back to get the train moving on the curve (a net loss of 12½ min.); then drawing the train up twice took 9¼ min. instead of the 5 min. allowed. Outside Peterborough, after a long preliminary slowing, the train was twice stopped, for 4¾ min. in all (a net loss of 8½ min.) and was at the platform 6½ min. instead of the 5 min. allowed. Despite the fine work of the locomotives, therefore, although the Flying Scotsman left Doncaster on time, it reached King's Cross 16 min. late.

Red Cross Facilities at Glasgow, Buchanan Street Station Rest Room

A rest room for the Forces was opened at Buchanan Street station, Glasgow, by the Scottish Branch of the British Red Cross on April 25. Ill or wounded sailors, soldiers, and airmen who are passing through Glasgow will receive attention from Red Cross nurses stationed at the rest room, which includes a fully equipped first-aid post. Those who are not invalids but who need rest will also be welcomed. The rest room, similar to that already operating at Waverley station, Edinburgh, will be open from 7.30 a.m. to 10.30 p.m., hours fixed to suit train times.

L.M.S.R. Cumberland Passenger Services Restored

The first case of passenger traffic being resumed, in consequence of the war, on an L.M.S.R. line previously closed for passenger service, affects the former Whitehaven, Cleator & Egremont Junction (Furness & L.N.W.R. Joint) section. Since March 11, workmen's trains, not advertised to the general public, have been running as between Drigg, on the Whitehaven—Barrow coast route, and Winder on the W.C. & E. Junction line, thus bringing into use again for regular passenger trains the sections between Sellafield and Moor Row, and between Moor Row and Rowrah, from which the services were withdrawn on January 7, 1935, and April 13, 1931, respectively. Stations which have resumed passenger business as a result of this development are Yeathouse, Cleator Moor, Moor Row, Woodend, Egremont, and Drigg. The only passenger trains which have used these stations since their closure for regular traffic were occasional pre-war evening and football excursions.

The German Railways

The Reichsbahn introduced its summer timetable on April 1, the same day that summer time began in Germany. It covers all the internal railway services in Germany, Bohemia and Moravia, and the German-controlled General Government of Poland. These services seem to have a limited interest, however, as ordinary pleasure trips by rail have been discontinued entirely, and journeys to watering places or spas are now permissible only in cases of extreme urgency, testified to by a doctor, according to an announcement on the German radio on April 24. This measure is explained by "The tremendous task of the German railways, not least as the result of the occupation of Denmark and Norway; the import of fodder and grain from the Soviet Union; the large-scale export of coal to Italy; the exchange of goods with the countries in South-Eastern Europe; and, above all, military exigencies. These requirements are imposing such a burden on the German railway system that all passenger traffic must be reduced to an absolute minimum," it was added. Just over a month earlier the considerable increase in holiday traffic caused press and radio warnings to be given that the obligation of the Reichsbahn to carry passengers had been suspended, and that holidaymakers might be refused. The German radio, on April 28, stated that no holidaymakers will be allowed to travel on the German railways at Whitsun without a special permit. This will not be granted unless the intending traveller can prove that his journey is necessary. Much has been made in the press outside Germany of the issue of an Order that the purchase of a railway ticket no longer entitles a person to travel, but it is obvious that a person would not buy a ticket on the offchance of obtaining the needful permits.

The Berlin radio station, broadcasting over the complete German system on April 23, stated that orders had been issued by the German High Command that no person would be allowed to travel by rail or road to the western and southern provinces of Germany near the Rhine and Switzerland border, including the areas of Baden and Freiburg, until further notice. Any person disobeying and travelling without a special permit will be imprisoned.

The first exchange of Allied civil prisoners for Germans took place on April 18, when 30 German women and children from the concentration camp at Lyons entered Germany at Basle station. A corresponding train of French and British prisoners from German camps crossed Switzerland on its way to France. The International Red Cross at Geneva hopes to continue the work of exchanging women and children interned in France and Germany, and also men prisoners over 65 or under 17 years of age.

Leave Transport for Mobilised Workers in Germany

Many workers have been mobilised for employment in Germany in industries of special war importance, and most of them are separated from their families in consequence. Home leave is given to married workers every three months, and to unmarried workers every six months. In each case the first leave falls due after the completion of the first period, of three or six months respectively. The duration of leave (which is normally without pay) is governed by the distance from the place of employment to the worker's home; it varies from three days to a maximum of six days, with Sundays and holidays counted as working days. Due to wartime transport difficulties, the workers are not permitted to choose the precise time of their leave, and journeys may be made only on Tuesdays, Wednesdays, and Saturdays. The worker is entitled to a third class railway ticket, and may claim a refund of the cost of transport between the works and the nearest railway station. Non-Germans similarly employed are entitled to the same leave, but receive free transport only within Germany or as far as the frontier. The regulations are intended to remain in force throughout the war.

Time Lost Owing to Air Raid Warnings

With reference to the loss of wages due to interruption of work by air raid warnings, the German Ministry of Labour published the following instructions, according to the *Frankfürter Zeitung* of December 19, 1939:—

"An air raid warning is an act of war which affects employers and workers alike. Just as the employer must bear the loss of decreased production owing to an air raid warning, the worker may have to suffer a decrease in wages. In order, however, to avoid placing an excessive burden on the workers, normal hours of work lost owing to an air raid warning may be made up within six weeks, so far as the undertaking is able. If, owing to conditions of operation, the lost time cannot be made up within six weeks, the employer must pay the workers compensation equal to not more than 50 per cent. of the wages they have lost, provided that he can afford to do so."

Wagon Unloading Regulations in Germany

By an Order dated November 30, 1939, the German Minister of Labour requires consignees of goods and their representatives (for instance, forwarding agents and carters), to unload goods, trucks, etc., within the time limits fixed by the railway administrations when the trucks are ready for unloading. The Order applies also on Saturdays, Sundays, and public holidays, but not on December 24, Christmas Day, and New Year's Day. With a view to carrying out this work, workers may be employed on Sundays and public holidays; if the

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work lasts more than three hours, the workers may not, as a general rule, be employed on more than one Sunday in two nor for more than two consecutive Sundays. The regulations are included in the *Reichsgesetzblatt* of December 1, 1939.

Strategic Railways in the Middle East

A Reuters message from Teheran reports that the first 112 miles of the Teheran-Tabriz railway have now been completed. It will be remembered that we recorded on page 558 in our issue of April 12 last that the first 90 miles from Teheran to Kazvin had been officially opened for traffic in March. It is evident that every effort is being made to hasten work on this important construction, which, when completed, will provide direct rail communication between Teheran and Turkey *via* a corner of Russian territory.

The new Iranian line is being built to the standard 4 ft. 8½ in. gauge; from Tabriz to the Russian frontier at Julfa, and the portion on Russian soil are of 5 ft. gauge; and the Russian gauge also extends into Turkey as far as Sarikamish. Onwards from Sarikamish there is a narrow-gauge (2 ft. 5½ in.) line to Erzerum, the present railhead of the Turkish 4 ft. 8½ in. railway system. It is highly probable that Turkey is converting both this narrow-gauge portion (as we indicated on April 5) and also the 5-ft gauge line in Turkey, but precise information is lacking, and may remain so for the time being, in view of the strategic importance of these railways. A map of this area was reproduced at page 521 of our April 5 issue.

We now learn that July 1 is the probable date for the projection of the Taurus Express from its present terminus at Mosul over the newly-completed line to Baghdad.

Denmark

Drastic, but unspecified, reductions in the services of the Danish State Railways seem to have been made during the past few days. Reductions by "more than 50 per cent." from Saturday last, April 27, were announced by the German-controlled Danish radio on April 23. However, on April 26 the *Hamburger Fremdenblat* said that the railway services in Denmark had already been reduced "by one train in four," and that bus services had also been curtailed. The ferry services across the Great Belt, between Nyborg and Korsør are stated to be restricted to one passage a day in each direction. Last week we recorded that on three occasions the vessels on this route had been "damaged by an explosion." The sailing times of all ferry services are now being kept secret. The ferry service between Denmark and Sweden over the Sound from Elsinore, North Zealand, to Helsingborg is stated to have been reopened on Sunday, April 21.

Sweden

The Swedish State Railways have decided to raise freight charges by 10 per cent. from June 1.

Norway

The events of the past week in Norway have been concerned almost entirely with the moves and counter moves of the German and the Allied Forces respectively in their endeavours to secure or retain control of strategic railways. Official information about the extent and disposition of the British troops in Norway is not available, and is not likely to be so during the present state of the campaign. It is known, however, that British landings have taken place in at least three areas (although the precise points are not specified), and it is clear that in every case the proximity of important railways has been the paramount consideration.

Allied Forces are known to be in the Narvik, Namsos, and Andalsnes areas. Of Narvik little has been said recently, but it appears that the Germans hold (though not unchallenged) most of the iron-ore railway from Narvik to the Swedish frontier.

In the Namsos area there are both British and French Forces, but it seems that overland connection with Narvik (there is no railway) is virtually impracticable. The Allied Forces are understood to control the Namsos-Grong railway, but southward towards Trondheim the line is cut by strong German Forces at Steinkjer. Namsos station has been severely damaged by German air raids.

From the base in the Andalsnes area, the Allied Forces secured possession of the railway to Dombås, between Dombås and Stören, along the Gudbrands valley towards Lillehammer, and along the (roughly parallel) Öster valley towards Elverum. German troops from the Oslo district are advancing up the two valleys from the southern ends in the endeavour to make contact with the German Forces in Trondheim, and the main struggle is over possession of the two Oslo—Trondheim railways up these valleys. German progress northward along the Öster valley has enabled attempts to be made—so far without success—to cut the Dombås-Stören railway by means of overland attacks from the Alvdal, Tynset, and Röros districts. On Wednesday it was claimed by Germany that both Dombås and Stören had fallen into German hands, and that the German troops from Oslo had thus made direct contact with those at Trondheim. These claims remained unconfirmed when we closed for press, and, on the other hand, it was stated on Wednesday evening that the Germans had been forced to retire from Röros southward along the Öster valley.

Further south, the Oslo-Bergen main line is also of considerable importance, as providing a link between the Germans in Oslo and Bergen respectively. The Norwegians, who hold the middle section of the railway, have so far prevented the Germans at Bergen from advancing much further eastward than Voss.

Russo-German Transit Traffic

Although denying reports that Russo-German goods traffic by railway had come to a standstill, the Official German Wireless admitted on April 27 that during the first three months of this year the carriage of goods by rail from Russia has been hampered by "technical difficulties." Severe frost and snow, it was added, had necessitated an extension of the period preparatory to bringing the Russo-German goods exchange up to the volume stipulated on December 20 of last year.

Imperial Air Lines

The regular passenger and mail air service between Australia and New Zealand was opened on Tuesday, April 30, by Tasman-Empire Airways. This service, which extends from Sydney to Auckland, completes the chain of Imperial air lines between England and New Zealand. Air mail correspondence for New Zealand, which has hitherto been forwarded by air as far as Sydney, Australia, and thence by surface route, will in future be conveyed by air throughout to New Zealand. There will be no alteration in the existing air postage rate of 1s. 3d. for half an ounce (postcards 7d.).

The statement was broadcast recently to Africa from Zeesen that "owing to the failure of the English to run an air service to Egypt, the Dutch air lines had been called upon to carry Egyptian air mails." In fact 13 British air services are regularly running to Egypt and back every fortnight. Ten of these are by flying boat and three by landplane. All carry mails between England and Egypt.

European Air Services

The Postmaster-General announced on April 25 the restoration of the letter mail services (including air mails) and the money order services to Sweden, Estonia, Latvia, and Lithuania, but the correspondence is subject to delay.

The daily air service between Moscow and Stockholm, *via* Riga, is to be resumed on May 3.

Heston will cease to be used as a civil airport about ten days hence. The London—Paris joint air line of the British Overseas Airways Corporation and Air France will then be transferred to Gatwick airport.

The K.L.M. began carrying passengers on its Amsterdam—Lisbon service on April 19.

An air line between Madrid and Lisbon was begun on April 20. Due to the civil war in Spain, there has been no air service between the two capitals for some years. Connections at Madrid now link Lisbon by air with Barcelona, Rome, and Locarno. Since May 1 the regular Barcelona—Rome seaplane service has omitted the call at Palma (Majorca).

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Manufacture of Locomotives in India

A summary of the report to the Railway Board upon this proposed new industry

The manufacture of steam locomotives in Indian railway workshops has been undertaken on a limited scale from the early years of railway operation. Between 1885 and 1926, the East Indian Railway workshops produced 214 broad-gauge locomotives, 103 boilers, and 99 tenders, and since 1896 as many as 435 metre-gauge locomotives have been turned out at the Ajmer workshops of the Bombay, Baroda & Central India Railway. In recent years the production at the Ajmer shops has been extended to cover the requirements of other metre-gauge railways in India. It can, therefore, be taken as established that locomotive building in India presents no mechanical or other technical obstacle. This is the finding of Messrs. J. Humphries and K. C. Srinivasan, the special officers appointed by the Railway Board to report on the possibilities of making India self-sufficient in the matter of locomotive building.

The idea of making India independent of foreign sources in the supply of railway materials originated in the years after the war of 1914-19. In 1921, the Government of India announced that tenders would be invited annually in India for all railway locomotives and boilers required by the Government during the 12 years from 1923 onwards. It estimated the requirements to be about 160 locomotives and 160 additional boilers during 1923 and 1924, and 400 locomotives and 400 additional boilers thereafter. After this declaration, the Peninsula Locomotive Company was formed. Its works at Jamshedpur were designed to produce 200 locomotives per annum, but, after spending Rs. 30 lakhs on buildings and machinery, the company applied for protection to the Indian Tariff Board. The annual requirements of the Indian railways having later fallen to between 60 and 100 locomotives, the Tariff Board considered that the indispensable preliminary condition of the existence of a sufficient market for locomotives in India precluded it from recommending protection for the locomotive industry, although considering it desirable on national grounds that this industry should be established.

The Peninsula Locomotive Company was soon afterwards dissolved and since that time various schemes for the manufacture of locomotives in State Railway shops have been considered, but laid aside on account of the uncertainty of an adequate and steady demand.

Estimate of Annual Requirements

The present inquiry has revealed that this objection has now ceased to exist and that the average annual requirements of Indian railways over an extended period of about 35 or 36 years, the life circle of a locomotive, would be a minimum of 74 broad-gauge and 26 metre-gauge locomotives, an equal number of additional boilers, and the spares and components required to keep the locomotives and boilers in good repair. Stated in terms of complete locomotives, the minimum average annual requirements of Indian railways have been estimated at 108 broad-gauge and 38 metre-gauge locomotives. The opinion of the special officers is that for the economic manufacture of locomotives, the optimum capacity of a factory would be one that would be capable of an average annual out-turn of 100 broad-gauge locomotives, equivalent to 70 such locomotives of 145 tons each, 70 additional boilers, and the necessary spares and components.

The investigating officers carefully examined the existing facilities in State Railway workshops in India with reference to the site most advantageous for the location of the locomotive industry, and they state in their report that they have found their choice restricted to the vicinity of the repair shops at Jamalpur, on the East Indian Railway, and Kanchrapara on the Eastern Bengal line. In addition to the facility of a ready source of labour of the proper type, the vicinity of an existing railway workshop as the site of the new industry has the great advantage of eliminating the duplication of arrangements for the supply of water, electricity, hydraulic, pneumatic, and steam power. No separate or even additional provision need be made for the engineering, stores, medical, accounting, housing, staff, and other services, and the existing administrative organisation of the railway would require little or no enlargement for purposes of general control. It is suggested that the transfer to Jamalpur of the repair work now being carried out at the Kanchrapara locomotive shops would enable a considerable portion of the plant and machinery at Kanchrapara to be used in the manufacture of locomotives there.

Estimates of Cost of Works

The capital outlay necessary for establishing a workshop suitable for building new locomotives is discussed in the report of the special officers from various aspects. If an independent and self-contained workshop for the manufacture of locomotives is erected and suitably equipped, the capital outlay is estimated at Rs. 208 lakhs, on which amount, the interest charges alone at 5 per cent. per annum would amount to over Rs. 10 lakhs or over Rs. 10,000 a locomotive manufactured. The estimated capital outlay for a manufacturing workshop located alongside an existing locomotive workshop other than Jamalpur is put at Rs. 138·73 lakhs. The location of the manufacturing shops at Jamalpur would further reduce the capital outlay to Rs. 108·73. The most promising is the fourth estimate of Rs. 47·46 lakhs as the capital outlay involved in the conversion of the existing locomotive repair shops at Kanchrapara into manufacturing shops. The report deals in detail with the feasibility of the transfer to Jamalpur of the periodical overhauls of locomotives now carried out at Kanchrapara. It is held that the Jamalpur shops have sufficient capacity to undertake the additional work without incurring any additional outlay in buildings or equipment. This view is based not only on an inspection of the equipment of these shops and the work carried out in them, but also on a comparative analysis of respective figures of out-turn at Jamalpur and Kanchrapara. A further advantage of the transfer of heavy locomotive repairs from Kanchrapara to Jamalpur lies in the possibility of eventual amalgamation of the broad-gauge section of the Eastern Bengal Railway with the East Indian Railway. In order to facilitate intermediate and minor repairs that may be necessitated on the E.B.R., suggestion is made that an intermediate repair shop be built and equipped at Kanchrapara, the cost of which is estimated at Rs. 1,14,250.

The estimated cost of production of an "XE" type locomotive complete with tender is as follows :—

Labour		Rs.	13,100
Materials			53,808
Oncost—			
Works Oncost	Rs. 10,205		
Supervision	7,261		
Administration	3,000		
Depreciation	4,930		
Interest on outlay ...	5,373		
			30,769
Total			97,677

Placed at Rs. 98,000 in round figures, the outer "margin of error," it is claimed, has been reduced to a minimum by the method of arriving at the cost of production. In regard to depreciation, a sum of Rs. 40 lakhs out of the total capital outlay of Rs. 90 lakhs on the existing locomotive shops at Kanchrapara has been transferred to the new shops. On a study of the prices paid by the Indian railways for imported locomotives of various types since 1930, the conclusion is drawn that the cost of manufacture of broad-gauge locomotives at Kanchrapara can be safely reckoned at 20 per cent. below the imported cost of similar types. As there has been no recent import of "XE"-type locomotives, direct comparison has not been possible. The cost to the Indian railways of this type of locomotive purchased in 1930-31 was Rs. 1,34,110. That prices have since considerably advanced is seen from the later information that 35 "XE" locomotives are on order for delivery in 1940-41 at a price of Rs. 1,86,882 c.i.f. Calcutta.

Though the cost of production of metre-gauge locomotives at Ajmer has been higher than the corresponding price of similar types of foreign manufacture, it is suggested that steps should be taken to increase substantially the out-turn of this workshop.

The opportunity that the war in Europe has presented for the inauguration of the locomotive building industry in India is strongly emphasised.

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Parliamentary Notes

Debate on Higher Railway Charges

In THE RAILWAY GAZETTE last week we gave the opening speech (by Mr. G. Ridley), the Minister of Transport's reply, and brief points from Sir George Courthope's remarks in the debate in the House of Commons on April 17 on the increase in railway charges. Below are summaries of certain other speeches made during the course of that debate.

Mr. Herbert Morrison (Hackney, South—Lab.): I presume that the operative paragraph of the agreement is No. 10 in the White Paper, Cmd. 6168. It should be noted that, presumably, this is not the agreement. It is a summary of it. That paragraph says: "Rates, fares and charges will be adjusted to meet variations in working costs and certain other conditions arising from the war, and machinery will be provided to this end."

I think the general body of Members, perhaps foolishly, took the view that it probably meant that if working costs went up, then, after taking into account the increase of gross revenue, whether from passenger fares, goods or otherwise, the Government gave an undertaking that in the light of both sides of the financial statement there would be an adjustment in charges. Now we are told by the Minister, however, that the Government has given an undertaking, and is implementing the undertaking, that, whether the gross revenue goes up or not, if the companies can prove that their working costs have increased, they are entitled to increase fares and charges to the extent of the increase in the working costs. Is that right?

Captain Wallace indicated assent.

Mr. Morrison: This presumably must be the correct interpretation of the agreement, namely, that if the working costs were estimated to have increased £10,000,000 over the year, and if the gross revenue had at the same time increased by the estimated figure of £20,000,000 the railway companies were entitled to increase fares and charges by £10,000,000 giving them a further increase of £10,000,000 over the £20,000,000. If that be so, I have never witnessed such a swindle on the public as this agreement in all my life. This is what the Minister says. If that is so, the thing is a fraud and a scandal, and the Government has been guilty of conducting business with the railway companies in such a way that it has put the business and interests of the railway companies in front of the public interest.

Sir Reginald Clarry (Newport—Con.): I should have thought the obvious answer to the railway companies' approach would be: "Have you attempted to make every possible economy in administration before coming to me?" I am sure there would be ways in which economies might be effected, in fuel, administration, staffing and wages. I gather that the increase in revenue, during the same period as is taken for the increased cost, came to about £9,000,000. That should have been a set-off for any request made for an increase in railway rates.

The Parliamentary Secretary to the Ministry of Transport (Mr. Bernays): We have not got the complete Agreement in front of us, because it is still being drafted. It is a very complex and complicated question, and what we have here are the heads of agreement; to these both the Government and the railway companies are bound. The actual increases in cost in the past, the estimates of future increases in cost and the estimated yield of increased charges have been stated and the figures can only be approved by an accountant's examination, which has been done in the finance department of the Ministry of Transport. What, in fact, could a consultation with the Railway Rates Tribunal have achieved? The items that justified the increase have been fully explained. They are facts; they are not subjects for argument and cannot be disputed. Is it really suggested that the railways ought to reap no increased benefit from the increased use of their systems? If that is the view of Members opposite, they are applying to railways a principle which is applied to no other concern. While every effort is made to see that no undue profits are made, it is not suggested—at least, I have never heard it suggested—that industries should not be allowed to make a penny more now than they made in the worst days of the slump. That certainly has not been applied to such industries as coal-mining and cotton. In the days before the war, the railways were making sub-normal profits.

What steps can the Government take to prevent this rise in railway rates except by subsidies? It would have to subsidise the railways at the expense of the general taxpayer, and I cannot see any justification for that. If road transport was not similarly subsidised, it would place it at an intolerable disadvantage as compared with the railways, and that is true too of coastwise shipping. In giving such a subsidy, the Government would be subsidising in part traffic which had no relation whatever to the war effort. It was deliberately decided by the Government, with the grim example of the last war in front of them, that the railways must be placed on an economic basis, and from that position the Government cannot depart.

Railway Refreshment Charges

Mr. W. A. Burke (Burnley—Lab.), on April 24, asked the Minister of Transport if he was aware that three privates in His Majesty's forces travelling from Blackpool to Aldershot were charged 2s. 6d., 2s. 3d. plus 3d. service, for three cups of tea only, in an L.M.S.R. dining car; and that the L.M.S.R. controller in correspondence stated that such charges were quite in order.

Captain Euan Wallace (Minister of Transport): I am advised that the charge of 2s. 3d. plus 3d. service charge was not for three cups of tea as the hon. member suggests but for three trays with pots of tea and biscuits, that is 9d. for each tray. The charge was the usual one made on the company's dining cars. Members of His Majesty's Forces in uniform can obtain cups of tea at the reduced charge of 2d. a cup in station refreshment rooms, that is a penny less than the ordinary charge.

Mr. Burke: Do I understand that these high charges have the approval of the Minister? Has he no control over these high charges?

Mr. H. Holdsworth (Bradford South—Lib. Nat.): Will the Minister of Transport pay attention to the sense of the House and make representation accordingly to the railway companies?

Captain Wallace: Yes, Sir.

London and the North Facilities

Mr. J. Batey (Spennymoor—Lab.), on April 24, asked the Minister of Transport whether, when fares were increased, he would see that more trains would be provided for passengers who were now unable to obtain seats between Durham and King's Cross, or that a less price should be charged for standing in the corridors, or sitting in the guard's van.

Captain Wallace: The passenger train services between Durham and London were reduced to enable a large number of special coal trains to be run from the collieries of Northumberland and Durham to London and the South. It is still necessary to maintain this special traffic, but by transfer of some coal trains to the L.M.S.R. it was found possible to increase the passenger services on April 15. The suggestion made in the last part of the Question is not a practicable one.

Mr. Batey: The Minister has not answered my question. When fares are increased will steps be taken to prevent passengers, especially soldiers, having to stand in the corridors?

Captain Wallace: If we were to do that, it would be necessary to restrict the sale of tickets to the number of seats on the train. I do not think that would be in the public interest.

Mr. Batey next asked the Minister of Transport if he could state the amount of money obtained by the L.N.E.R. by running coal from Newcastle to London.

Captain Wallace: Assuming an average load of 500 tons, the gross receipts from a train of coal from Northumberland to London would vary between £425 and £450.

Answering supplementary questions as to the possibility of accelerating train services, Captain Wallace replied: The difficulty is that if we increase the speed, wear and tear are increased, which means an extra demand on steel.

Limitation of Dividends

Mr. J. Wilmot (Kennington—Lab.), on April 30, asked the Chancellor of the Exchequer whether the limitation of dividends will apply to the railways.

Sir J. Simon: The provisions of the Bill to be introduced will apply to railway main-line companies in common with other public companies.

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RAILWAY AND OTHER MEETINGS

The San Paulo (Brazilian) Railway Co. Ltd.

The ordinary general meeting of the San Paulo (Brazilian) Railway Co. Ltd. was held on April 30 at Southern House, London, E.C. Mr. Oliver R. H. Bury, M.I.C.E., Chairman of the company, presided.

The Secretary, Mr. Vernon Hinde, having read the notice convening the meeting and the auditor's report,

The Chairman, in moving the adoption of the report and accounts, said that two outstanding events affected the results of the year, the outbreak of war in Europe, and the approval by the Minister of Transport of increased rates, which were brought into force on October 1 last.

The immediate effect of the commencement of hostilities in Europe appeared to have been some revival in the traffic in coffee, which was apparent up to the end of November. There was also an appreciable improvement in exchange.

The Minister of Transport had appointed a commission to consider rates, and as a result of the report of that commission, on October 1 last an increase in rates was granted, designed to give the company an increase of 13,800 contos of reis on a normal year's traffic. These new tariffs produced an average result within 9 per cent. of the expectation. The increases accorded were more particularly in the lower classifications, and a study of this matter enabled the company to provide for actual reductions in the rates of some of the higher classifications more susceptible to competition, and to embrace certain basic principles which the authorities indicated as desirable to bring the system of rating of the railway into line with the standard which they desired to see observed.

The results for the year on the whole could be regarded as satisfactory. The receipts in currency, including the Bragantina section, amounted to 145,000 contos of reis, in comparison with 144,000 contos of reis in 1938. In sterling, the receipts were £1,699,000, compared with £1,661,000. The feature of the year's working was a decrease of 128,000 tons, or 17 per cent. in coffee traffic, giving a decrease of 24 per cent. in the receipts from this traffic. The working expenses were 106,000 contos of reis against 105,000 contos of reis. As expressed in sterling, they were £1,245,000 compared with £1,207,000. The net profit resulting, after deduction of London office expenses, interest on stores, and pension fund in Brazil, was £347,000 compared with £344,000 in the year 1938. Adding the amount brought forward, a transfer from the bridge renewal fund, interest on deposit with the Bank of Brazil under agreement of June, 1933, previously held in suspense, interest on investments and interest on balance of stores, gave a total of £671,974.

Deducting interest on debenture stock and redemption, general interest, amount payable to associated company under agreement, provision for income tax and national defence contribution, general interest, the allocation to rolling stock replacement reserve, a transfer of £100,000 to reserve fund, and the interim dividend paid in October last on the 5 per cent. preference stock, makes a total of £459,767, and leaves a balance available for appropriation of £212,207. The directors proposed a final dividend of 2½ per cent., less income tax, on the preference stock, making 5 per cent. for the year, and a dividend of 2½ per cent., free of income tax, on the ordinary stock. This would absorb £100,000, leaving £112,207 to be carried forward, compared with £86,444.

The volume of passengers and goods was again in excess of any previous year, in spite of considerable diversion of goods traffic to the Sorocabana Railway, due to the operation of its Mayrink to Santos extension. Passengers showed an increase of 2,320 contos. In goods traffic, the company had a decrease in value of 2,332 contos of reis, accounted for by a decrease of 127,682 tons of coffee, or 8,490 contos of reis, due to the diversion of traffic to the Mayrink-Santos line.

Negotiations had begun in conjunction with the neighbouring railway, the Paulista, whereby the company's through rates to Santos from competitive points, which were higher than the rates of the Sorocabana Railway, should be equal to the latter.

The total goods carried by the company's road vehicles was 355,700 tons compared with 336,000 tons in the previous year. Of that total, 339,000 tons, or 95 per cent., was carried in mutual traffic with the railway, and in respect of this, the road motor company paid to the railway 9,185 contos of reis, or £107,365 which was £41,730 more than the £65,635 paid by the railway to the road motor company.

In the Bragantina section, there was a loss of £9,200, in comparison with £10,546. This branch railway had cost the San Paulo Railway £589,000.

The report and accounts were unanimously adopted.

Railway and Other Reports

Yorkshire Woollen District Transport Co. Ltd.—For the year 1939 net traffic and other receipts amounted to £191,623 compared with £196,427 in 1938, and interest and dividends to £9,039, against £7,372, making a total of £200,662. The net profit, after providing for expenses, rates, benefit funds, directors' fees, and taxation, amounts to £88,636 compared with £97,323. Adding £26,529 (against £12,006) brought in makes a total available of £115,165. A sum of £30,000 is again transferred to reserve and the ordinary dividend for the year is maintained at 10 per cent. net, requiring £52,800, leaving £32,365 to be carried forward. This company is controlled jointly by the L.M.S.R. (with 176,000 shares), the L.N.E.R. (with 88,000 shares), and the British Electric Traction Co. Ltd.

Yorkshire Traction Co. Ltd.—This company, which is controlled jointly by the L.N.E.R., L.M.S.R., and Tilling & British Automobile Traction Limited, secured in 1939 net traffic and other receipts of £177,506, compared with £182,483 in 1938, and interest and dividends of £6,409, against £4,713. After providing for expenses, benefit funds, etc., £13,503, against £12,050; and for taxation £91,522, against £91,649, there is a net profit of £78,890 compared with £83,497. Adding £17,987 brought forward makes a total available of £96,877. The preference dividend for the year takes £1,704, the sum of £33,000 (against £37,500) is appropriated to reserve, and the dividend for the year is again 10 per cent., net, but requires £43,750 compared with £35,000, leaving £18,423 to be carried forward. The authorised capital was increased during the year by 100,000 additional ordinary shares of £1 each.

Potteries Motor Traction Co. Ltd.—This company, a subsidiary of the British Electric Traction Co. Ltd., earned in 1939 net receipts (after depreciation) of £177,350 (£163,884). Adding interest and dividends £3,348, gives £180,698. Expenses, directors' remuneration, employees funds, and road duty and taxation (£80,008), take altogether £95,654, leaving a net profit of £85,044, against £83,084. Adding £23,839 brought in, makes a total available of £108,883. The directors have again transferred £30,000 to reserve and recommend a final dividend of 6 per cent. (again making 10 per cent. for the year), which requires £54,125, leaving £24,758 to be carried forward.

Devon General Omnibus & Touring Co. Ltd.—This company is jointly controlled by the British Electric Traction Co. Ltd., through its subsidiary, the National Electric Construction Co. Ltd. (50 per cent.), the Great Western Railway Company (30 per cent.), and the Southern Railway Company (20 per cent.). The profit for the year 1939, after providing for depreciation, was £64,930, against £59,170 for 1938. Adding the balance of £14,925 from the previous year makes a total of £79,855, against £75,425. A sum of £25,000 (the same) is appropriated to reserve, and of £2,000 to employees' assistance account, and the directors again recommend a dividend on preference shares for the year (£10,500), and a dividend of 10 per cent. and a bonus of 2½ per cent. on the ordinary shares for the year (£25,000), leaving £17,355 to be carried forward.

XUM

NOTES AND NEWS

L.M.S.R. Halt Renamed. — Cop Lane halt, on the L.M.S.R. Preston and Southport line, has been renamed Penwortham (Cop Lane).

L.M.S.R. Express Derailed.—On April 25 the last nine coaches of the 8.15 a.m. Liverpool to London express were derailed at Atherstone, Warwickshire. Little damage was done.

Vienna Locomotive Works.—The Wiener Lokomotivfabriks A.G., the majority of whose shares passed into the hands of Henschel & Sohn G.m.b.H., of Kassel, in 1938, held an extraordinary meeting at Kassel recently, when it was proposed to increase the capital by 5,000,000 Reichsmarks.

Brazilian Government Takes Over Two Railways.—The Federal Government of Brazil, by a Decree-law dated March 8, has taken over all the assets of the Estrada de Ferro São Paulo-Rio Grande and its affiliated concerns, a railway which was already operated by the State. Holders of the fr. 161,091,000 debentures held abroad and still outstanding, are to be compensated by payment in 5 per cent. Federal bonds. Under another Decree, the Federal Government also takes over the Estrada de Ferro D. Thereza Christina, which was leased to a national coal mining company.

Railway Conference with Southport.—On April 12 representatives of the L.M.S.R., Thomas Cook & Son Ltd., and Southport Corporation discussed travel facilities to Southport during the season now opening. It was stated that at Easter, 1939, there were 83,048 passengers to Southport, compared with 85,394 at Easter 1938. From May to August, 1939, the figure was 1,212,681 or 41,247 more than in the similar period of the previous year. Included in the latter figures were 154,330 ordinary and period tickets in 1939, an increase of 8,228 over 1938. War conditions had at first greatly affected travel but gradually there had been a return to conditions which enabled the general population to contemplate holidays. The Chairman of the Southport Publicity Committee, Mr. H. W. Barber, pointed out that the corporation was providing many amenities and attractions. Mr. C. Johnstone, Assistant to the Chief Commercial Manager, L.M.S.R., said that it was the intention of the railways to cater as far as possible for traffic to seaside reorts.

Nizam's State Railway Air Service.—An Associated Press message reports the inauguration, on April 9, of a new air service between Hyderabad, Bangalore, and Madras by H.E.H. the Nizam's State Railway. The plane leaves Hyderabad every Tuesday and Sunday returning the following days.

Shanghai Railways to be Handed Over to New Chinese Puppet Government.—A Reuters message from Shanghai states that the Shanghai-Nanking and Shanghai-Hangchow Railways, traversing Japanese-occupied territory, are to be handed over to the Ministry of Railways in Mr. Wang Ching-Wei's new puppet Government, according to *The Shanghai Evening Post*. The Ministry will be required to pay a heavy bill for expenses incurred while the railway has been in Japanese hands, including the value of rolling stock transferred from the South Manchuria Railway, repairs to bridges and track damaged in the fighting, and "protection" costs.

Railway Amalgamation before 1921.—At a meeting of the Railway Club held at 57, Fetter Lane, E.C.4, on April 4, the President, Mr. Kenneth Brown, read a paper entitled: "Railway Amalgamation before 1921." Beginning with the amalgamation of the Wigan Branch Railway with the Preston & Wigan line to form the North Union Railway, the lecturer dealt with a considerable number of railway amalgamations including those of the North Midland, the Midland Counties, and the Birmingham & Derby Junction lines into the original Midland Railway; the London & Birmingham, the Grand Junction, the Manchester & Birmingham, and the Liverpool & Manchester into the L.N.W.R.; the various companies which were amalgamated to form the Manchester, Sheffield & Lincolnshire, later to become the Great Central; the formation of the Great Eastern Railway in 1862; and establishment of the Managing Committee of the South Eastern and the London Chatham & Dover Railways in 1899.

Irish Traffic Returns

IRELAND		Totals for 16th Week			Totals to Date		
		1940	1939	Inc. or Dec.	1940	1939	Inc. or Dec.
		£	£	£	£	£	£
Belfast & C.D. (80 miles)	pass.	2,368	1,812	+ 556	35,692	28,856	+ 6,836
	goods	474	410	+ 64	7,664	6,775	+ 889
	total	2,842	2,222	+ 620	43,356	35,631	+ 7,725
Great Northern (543 miles)	pass.	9,400	8,550	+ 850	158,200	142,950	+ 15,250
	goods	13,000	11,100	+ 1,900	180,700	160,850	+ 19,850
	total	22,400	19,650	+ 2,750	338,900	303,800	+ 35,100
Great Southern (2,076 miles)	pass.	28,523	30,278	− 1,755	479,672	473,370	+ 6,302
	goods	52,443	45,781	+ 6,662	690,961	658,814	+ 32,147
	total	80,966	76,059	+ 4,907	1,170,633	1,132,184	+ 38,449
L.M.S.R. (N.C.C.) (271 miles)	pass.	4,910	3,350	+ 1 560	69,230	52,850	+ 16,380
	goods	4,080	3,400	+ 680	54,320	46,060	+ 8,260
	total	8,990	6,750	+ 2,240	123,550	98,910	+ 24,640

British and Irish Railway Stocks and Shares

Stocks	Highest 1939	Lowest 1939	Prices April 30, 1940	Rise / Fall
G.W.R.				
Cons. Ord.	38	21½	45½	−2
5% Con. Pref. ...	92	71	100½	+2
5% Red. Pref. (1950)	98	83	103½	—
4% Deb.	103	91	104½	+2
4½% Deb.	105½	93¾	106½	+1
4½% Deb.	110	99	111	—
5% Deb.	121	109½	122½	—
2½% Deb.	63½	54	65½	—
5% Rt. Charge ...	117	104	116	—
5% Cons. Guar. ...	111	96½	114	+1
L.M.S.R.				
Ord.	17	9¼	21¾	−¾
4% Pref. (1923) ...	46½	20	54½	+2½
4% Pref.	63½	37½	65½	+3½
5% Red. Pref. (1955)	83	58¾	93	+2
4% Deb.	98½	85	100½	+2
5% Red. Deb. (1952)	109	101½	107*	—
4% Guar.	87⅞	73	90½	+3
L.N.E.R.				
5% Pref. Ord. ...	5¾	3½	6	—
Def. Ord.	3½	1⅜	3⅜	—
4% First Pref. ...	38½	19	53	+3½
4% Second Pref. ...	15	7⅜	20	—
5% Red. Pref. (1955)	55	38	74	+2½
4% First Guar. ...	78½	60	82½	+4
4% Second Guar. ...	68⅜	47	71½	+4
3% Deb.	71⅛	57	72½	+1
4% Deb.	93	76	95½	+2
5% Red. Deb. (1947)	106½	98	104½	+1
4½% Sinking Fund Red. Deb.	104½	96	102½	—
SOUTHERN				
Pref. Ord.	78	46½	71	+1
Def. Ord.	19½	7	20	−1
5% Pref.	100	76	100½	+2
5% Red. Pref. (1964)	102	94	102½	—
5% Guar. Pref. ...	116½	103	114	+1
5% Red. Guar. Pref. (1957)	112¼	102⅛	110½	+1
4% Deb.	103	91½	103½	+2
5% Deb.	118½	109½	122½	—
4% Red. Deb. (1962–67)	106	98	104½	—
4% Red. Deb. (1970–80)	102	96	103½	—
FORTH BRIDGE				
4% Deb.	98½	81	92½	—
4% Guar.	95	80	92½	—
L.P.T.B.				
4½% "A"	115	103	109½	+1
5% "A"	123	106½	117½	—
4½% "T.F.A." ...	105	100⅛	103½	—
5% "B"	117½	102	109½	—
"C"	84	63⅞	44	—
MERSEY				
Ord.	24	17½	25½	—
4% Perp. Deb. ...	93⅜	88½	91	—
3% Perp. Deb. ...	77	65½	65½	—
3% Perp. Pref. ...	55	49¾	54½	—
IRELAND				
BELFAST & C.D.				
Ord	6	3	4	—
G. NORTHERN				
Ord.	6	2½	4	—
G. SOUTHERN				
Ord.	13½	8	10	—
Pref.	26	10	22½	—
Guar.	40½	22	28	−1½
Deb.	57	45⅜	51¼	+¼

* ex dividend

STAFF AND LABOUR MATTERS

Railway Wages

Representatives of the Railway Executive Committee met representatives of the National Union of Railwaymen, the Associated Society of Locomotive Engineers & Firemen, and the Railway Clerks' Association in London on April 26, for the purpose of discussing applications made by the trade unions for the war advances payable to railway staff to be increased by 6s. a week for the wages grades and £15 a year for the salaried grades. The official announcement issued at the close of the meeting stated that the trade unions explained the reasons which had prompted their applications, and the representatives of the Railway Executive Committee undertook to consider the representations which had been made and to give a reply as soon as possible.

Employment of Women Bus Conductors

The Industrial Court, after a hearing which lasted four days, has issued its award on the difference between the two sides of the National Joint Industrial Council for the Road Transport Industry in regard to the employment of women conductors during the war. The terms of reference to the Court were as follow :—

(1) The trade union representatives on the council contend that the rates of pay and conditions of service for adult male conductors have already been determined by agreement ; that these rates and conditions should apply in respect of all adult appointments to the conductor grade ; and that none other than adult women, *i.e.*, women of 21 years of age and over, should be appointed.

(2) The employers' representatives on the council contend that, where women are employed, local authorities should have the right to employ them as conductors on the following conditions :—

(*a*) That in the case of women conductors being employed to replace men, it should be for the period of the war only and until such time as the men return to their employment.

(*b*) That in respect of women conductors, 40 hours shall replace 48 hours in clause 1 (*a*) of the Conditions of Service Agreement of October 21, 1937, which prescribes the guaranteed week.

(*c*) That in respect of women conductors, the first period of service on which increment pay shall be granted shall be six months longer than the first period of qualifying service of men conductors on the same undertaking, subsequent increments being correspondingly postponed six months.

(*d*) That a differential rate be paid to women conductors, but that this rate shall be not less than 90 per cent. of the male conductors' rate of pay on the same undertaking.

The Industrial Court by Award No. 1755 ruled that :—

(1) Women conductors being employed to replace men shall be over the age of eighteen.

(2) The scales of pay of women conductors shall be as follow :—

For the first six months of service not less than 90 per cent. of the adult male conductor's commencing rate and thereafter the scale of pay and increments applicable to adult male conductors in the undertaking in which they are employed.

Provided that women under 21 years of age, during such time as they are under that age, shall receive not less than 90 per cent. of the adult male conductors' commencing rates in the undertaking in which they are employed. Women who during service attain the age of 21 and have served for not less than six months shall receive the full rate.

(3) The conditions of employment of women conductors employed in place of adult male conductors shall be the same as those provided for in the agreement of October 21, 1937, in so far as they are applicable to adult male conductors, save that the guaranteed week may be for 40 hours instead of 48 hours, provided that all time worked in excess of 40 hours shall be paid for at the overtime rates applicable to adult male conductors.

CONTRACTS AND TENDERS

A contract has been signed between the Turkish Government institution known as the Eti Bank and the Metropolitan-Vickers Electrical Co. Ltd., covering an electrification scheme including the construction of a power station at Catalagzi, on the Anatolian coast of the Black Sea. The order, which has been obtained in the face of international competition, has a value of approximately £1,500,000. The scheme is intended mainly to provide electric power for the modernisation and expansion of the Turkish coal industry and the site of the station is close to the Zonguldak coal basin. The contract includes the building and equipment of a 60,000-kW power station, and the provision of switchgear, overhead line, and three substations for a transmission system about 10 miles in length. The principal subcontractors to Metro-Vick include :—

Babcock & Wilcox Limited : Boilers and coal-handling plant.
Holloway Bros. (London) Limited : Buildings and civil engineering work, including cooling-water intake.
British Insulated Cables Limited : Overhead transmission line and cable.

The initial generating plant will consist of three 20,000 kW turbo-alternator sets and Metro-Vick central-flow condensers and four-stage feed-heating. Transmission to the sub-station will be at 66 kV, the station output being stepped up to this voltage by an outdoor transformer and switching station.

W. G. Bagnall Limited has received an order from the Rohilkund & Kumaon Railway for five boilers for 4-6-0 locomotives, to the inspection of Messrs. Rendel, Palmer & Tritton.

The Thailand State Railways have ordered 500 covered wagons of about 18 tons capacity from the Magor Car Corporation, U.S.A.

The following orders have been placed to the inspection of Messrs. Robert White & Partners :—

Jaipur State Railway :
Vulcan Foundry Limited : 8 pairs of loco. wheels and axles.
North British Locomotive Co. Ltd. : 20 pairs of bogie and tender wheels and axles.
South Indian Railway :
J. Stone & Co. Ltd. : 3 tons of dry electrolyte.
Steel, Peech & Tozer : 23 tons of spring steel.
H. J. Skelton & Co. Ltd. : 49 tons of steel bar.
W. Beardmore & Co. Ltd. : 9 axle billets.
Bhavnagar State Railway :
Superheater Co. Ltd. : 100 superheater return bends.

Beyer, Peacock & Co. Ltd. has received an order from the Peruvian Corporation for one boiler for a 2-8-0 locomotive on the Southern Railway of Peru.

South African Airways, operated by the South African Railways & Harbours administration, has ordered 13 Lodestar and two Excalibur air liners from the Lockheed Aircraft Corporation, U.S.A., at a price reported to be about £525,000.

The Egyptian State Railways have placed the following orders :—

Industrial Steels Limited : 25 wagon axles.
Bullers Limited : Signalling materials (No. 324.G.8/127, items 1-3, 7-10, 12-14 ; £353).
Westinghouse Brake & Signal Co. Ltd. : Signalling material (No. 324.G.8/127, items 4-6, 11, 15 and 17 ; £1,891).
Rail Anchors Limited : Rail Anchors (No. 302.G.3/29 ; £2,431).
H. J. Skelton & Co. Ltd. : Mild steel rounds (No. 1.588 ; £8,303), and mild steel bars and plates (No. 1.591 ; £1,872).

The South African Railways invite tenders for the following equipment :—

Two 15-ton cranes (No. 2586 ; May 6).
Eleven 4-ton cranes (No. 2587 ; May 6).
Galvanised sheets (No. 2621 ; May 6).
Vacuum brake gear, metal parts (No. 2635 ; May 7).
Bridgework (No. 2677 ; May 9).
Cotton terry towels and towelling (No. 2664 ; May 10).
Carriage fittings (No. 2632 ; May 14).
Bridgework, for Nottingham Road (No. 2650 ; May 16).
Rolled steel beams (No. 2672 ; May 16).
Two narrow-gauge steam locos. (No. 2549 ; May 20).
Ingot lead (No. 2645 ; May 21).
Pressed steel tank (No. 2676 ; May 23.

The Argentine State Railways are enquiring for ten 4-6-2 steam passenger locomotives.

The South African Railways are enquiring for 2,000 pairs of wheels and axles for carriages and wagons. Particulars from the High Commissioner's office in London.

The Egyptian State Railways are enquiring for 45 tons of mild steel rounds (No. 301.G.8/208 ; May 25) ; 7 tons of mild steel rivets (No. 3.400) ; and for 60 tons of coloured cotton waste (No. 343.G.3/4 ; June 6).

Sheffield Corporation is enquiring for two steam shunting locomotives for the Electricity Department. Particulars from the General Manager of the department ; tenders to be in by May 15.

XUM

Railway Stock Market

The outstanding feature of business on the Stock Exchange has been the continued strength of British Funds on further consideration of the Budget changes. Home railway prior charges and guaranteed and preference stocks participated in the upward tendency in fixed interest-bearing securities, and the prevailing view is that in many cases they appear relatively undervalued, bearing in mind the attractive yields obtainable. L.M.S.R. senior preference, for example, still yields fully 6 per cent., and the return on the 1923 preference, and also on L.N.E.R. first preference, is over 7¼ per cent., and that on L.N.E.R. second guaranteed is approximately 5½ per cent. On the other hand, ordinary stocks have shown a reactionary tendency, following confirmation that, despite the financial arrangements with the Government, these securities will be subject to the dividend limitation proposals, announced in the Budget as applying to the ordinary or equity securities of public companies. The maximum dividends that could be paid on Great Western ordinary, L.M.S.R. ordinary, and Southern deferred will now be 4 per cent. In the case of Southern deferred, however, the highest dividend that can be earned is 3·2 per cent., so that in effect the 4 per cent. maximum does not apply. It is, of course, expected that Southern preferred will continue to receive its full 5 per cent., and at the current price the yield is approximately 7 per cent.

As compared with a week ago, Great Western ordinary shows a decline from 47½ to 46 on balance, but the 5 per cent. preference moved up from 98½ to 101 and the 4 per cent. debentures from 102½ to 104½. L.M.S.R. ordinary, the dividend on which is being estimated at 2½ per cent. for the current year, declined on balance from 22¾ to 21¾. A rise from 62½ to 65½ was shown in the 4 per cent. senior preference, and the 4 per cent. 1923 preference was two points better at 54½, while at 100½ the 4 per cent. debentures showed a similar rise, and the 5 per cent. debentures continued at 107. Moreover, the 4 per cent. guaranteed L.M.S.R. stock was 90, compared with 87½ a week ago. Southern deferred at 20⅝ was a point down on balance, but the preferred improved from 70 to 71½. Southern 5 per cent. preference has been marked up from 98½ to 101, and the guaranteed stock was a point higher at 113½, while the 4 per cent. debentures appreciated from 101 to 103½. L.N.E.R. issues showed several good gains on the week, the second guaranteed having moved up from 67½ to 72½, and the first guaranteed from 78½ to 83. As regards the first preference, the price was four points higher at 53, but, as in many other instances, best prices touched in the past few days were not fully held. L.N.E.R. second preference was around 20; the 4 per cent. debentures improved from 94¾ to 95½, and the 3 per cent. debentures from 71½ to 72½. Elsewhere, London Transport "C" was 44½, and Metropolitan Assented 55.

In sympathy with the general tendency on the Stock Exchange, ordinary and preference stocks of Argentine railway companies lost most of their recent rally, but the debentures were firmly held and remained in short supply in the market. The lower prices were attributed to falling off in demand; little selling pressure was reported. French railway sterling bonds showed small losses, and elsewhere San Paulo ordinary stock was lower, following the decline in Brazilian Government bonds. There was an easier tendency in Canadian Pacific shares and preference stock, but the 4 per cent. debentures were firm at 88.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

	Railways	Miles open 1939-40	Week Ending	Traffic for Week: Total this year	Traffic for Week: Inc. or Dec. compared with 1939	No. of Weeks	Aggregate Traffics to Date: Totals: This Year	Aggregate Traffics to Date: Totals: Last Year	Aggregate Traffics to Date: Increase or Decrease	Shares or Stock	Prices: Highest 1939	Prices: Lowest 1939	Prices: April 30, 1940	Prices: Yield % (See Note)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili) & Bolivia	834	21.4.40	21,100	+ 7,560	16	312,240	220,230	+ 92,010	Ord. Stk.	10⅜	4½	11½	Nil
	Argentine North Eastern	753	20.4.40	ps. 146,600	– ps. 47,000	43	ps. 6,360,400	ps. 6,610,500	– ps. 250,100	,,	4½	2	3½	Nil
	Bolivar	174	Mar. 1940	4,370	– 230	13	11,590	11,700	– 110	6 p.c. Deb. Bonds.	7½	5¾	7	Nil
	Brazil	—	—	—	—	—	—	—	—		5¾	4¾	8	6½
	Buenos Ayres & Pacific	2,801	20.4.40	ps.1,555,000	– ps.220,000	43	ps.58,794,000	ps.60,650,000	– ps. 1,856,000	Ord. Stk.	5½	2	4	Nil
	Buenos Aires Central	190	9.3.40	$76,000	– $1,600	37	$3,635,600	$3,822,400	– $186,806	Mt. Deb.	14	8	13½	Nil
	Buenos Ayres Gt. Southern	5,082	20.4.40	ps.2,213,000	– ps.397,000	43	ps.100,438,000	ps. 99,786,000	+ ps. 652,000	Ord. Stk.	13⅜	4½	8½	Nil
	Buenos Ayres Western	1,930	20.4.40	ps. 934,000	– ps.108,000	43	ps.33,447,000	ps. 31,441,000	+ ps. 2,006,000	,,	10½	4	7½	Nil
	Central Argentine	3,700	20.4.40	ps.1,660,250	– ps.469,450	43	ps.74,642,550	ps. 81,146,150	– ps. 6,503,600	,,	11½	4	7½	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	4	1½	4	Nil
	Cent. Uruguay of M. Video	972†	20.4.40	19,557	+ 924	43	894,870	785,957	+ 108,913	Ord. Stk.	2½	7/8	3½	Nil
	Costa Rica	188	Feb. 1940	16,895	– 4,824	35	136,096	177,211	– 41,115	Stk.	24½	18	22	9½
	Dorada	70	Mar. 1940	11,800	– 2,500	13	34,500	40,400	– 5,900	1 Mt. Db.	104½	102	102½	5⅛
	Entre Rios	810	20.4.40	ps. 176,400	– ps. 72,100	43	ps.10,031,900	ps.10,735,000	– ps 703.100	Ord. Stk.	6	3	3½	Nil
	Great Western of Brazil	1,016	20.4.40	10,100	+ 2,300	16	201,500	169,800	+ 31,700	Ord. Sh.	3/-	1/2½	7/8	Nil
	International of Cl. Amer.	794	Feb. 1940	$604,831	+ $55,394	8	$1,170,321	$1,097,710	+ $72,611	—	—	—	—	—
	Interoceanic of Mexico	—	—	—	—	—	—	—	—	1st Pref.	7½d.	7½d.	½	Nil
	La Guaira & Caracas	22½	Mar. 1940	7,370	+ 955	13	21,975	15,820	+ 6,155	Stk.	7	6½	6½	N.I
	Leopoldina	1,918	20.4.40	20,267	+ 5,699	16	356,145	322,545	+ 33,600	Ord. Stk.	2½	½	2	Nil
	Mexican	483	21.3.40	$317,100	– $1,400	11	$3,651,600	$3,578,300	+ $73,300	,,	1⅛	½	½	Nil
	Midland of Uruguay	319	Mar. 1940	12,567	+ 3,360	40	93,700	83,075	+ 10,625	,,	2/-	½	½	Nil
	Nitrate	386	15.4.40	5,627	+ 504	15	55,960	38,118	+ 17,842	Ord. Sh.	2½	1½	2⅜	5⅜
	Paraguay Central	274	20.4.40	$3,099,000	– $633,000	43	$134,121,000	$129,640,000	+ $4,481,000	Pr. Li. Stk.	45½	36	40	15
	Peruvian Corporation	1,059	Mar. 1940	74,738	+ 5,140	40	606,651	609,165	– 2,514	Pref.	1 7/16	⅞	3½	Nil
	Salvador	100	23.3.40	c30.228	+ c10,178	39	c743,333	c827,514	– c84,181	Pr. Li. Db.	19½	16	15	Nil
	San Paulo	153½	14.4.40	37,192	+ 3,039	15	502,880	432,928	+ 69,952	Ord. Stk.	38	20	49½	5 1/16
	Taltal	160	Mar. 1940	3,005	– 730	40	23,135	27,530	– 4,395	Ord. Sh.	⅜	6/6	1/16	7½
	United of Havana	1,353	20.4.40	41,333	+ 8,396	43	1,018,634	1,003,333	+ 15,301	Ord. Stk.	2	½	⅜	Nil
	Uruguay Northern	73	Mar. 1940	1,411	+ 553	40	9,950	9,104	+ 846	Deb. Stk.	2	2	2	Nil
Canada	Canadian National	23,695	21.4.40	814,097	+ 142,411	16	13,083,885	10,288,454	+ 2,795,431	—	—	—	—	—
	Canadian Northern	—	—	—	—	—	—	—	– 4 p.c.	Perp. Dbs.	74½	60	79	5 1/16
	Grand Trunk	—	—	—	—	—	—	—	—	4 p.c. Gar.	100½	76	99½	4
	Canadian Pacific	17,167	21.4.40	519,600	+ 62,600	16	8,742,400	7,312,400	+ 1,430,000	Ord. Stk.	7⅞	3½	8½	Nil
India †	Assam Bengal	1,329	31.3.40	46,747	– 1,614	52	1,587,855	1,532,195	+ 55,660	Ord. Stk.	76½	60	79½	3¾
	Barsi Light	202	10.4.40	3,037	– 480	2	3,037	3,517	– 480	Ord. Sh.	56½	50½	43½	8 1/16
	Bengal & North Western	2,096	10.4.40	86,590	+ 11,490	2	86,590	75,100	+ 11,490	Ord. Stk.	277	229½	278	5½
	Bengal Dooars & Extension	161	10.4.40	3,620	+ 930	2	3,620	2,690	+ 930	,,	91	84½	215	3
	Bengal-Nagpur	3,267	10.4.40	244,875	+ 23,314	2	244,875	221,561	+ 23,314	,,	94¾	83½	95½	4 1/16
	Bombay, Baroda & Cl. India	2,986	20.4.40	289,650	+ 22,500	3	560,700	525,300	+ 35,400	,,	108	90	107½	5 1/16
	Madras & Southern Mahratta	2,967	10.4.40	186,300	+ 10,581	2	186,300	175,719	+ 10,581	,,	104 11/16	92	102½	7 1/16
	Rohilkund & Kumaon	571	10.4.40	23,757	+ 7,323	2	23,757	16,434	+ 7,323	,,	280	263	280	5 1/16
	South Indian	2,531¾	31.3.40	136,992	+ 4,196	52	4,128,052	4,100,582	+ 27,470	,,	102½	88	92½	5⅜
Various	Beira	204	Jan. 1940	74,624	—	17	294,262	—	—	—	—	—	—	—
	Egyptian Delta	623	31.3.40	5,381	—	52	214,172	215,449	– 1,277	Prf. Sh.	½	¼	⅜	Nil
	Kenya & Uganda	1,625	May 1939	206,557	– 11,295	21	1,220,870	1,309,332	– 88,462	—	—	—	—	—
	Manila	—	—	—	—	—	—	—	—	B. Deb.	55	39	48	7½
	Midland of W. Australia	277	Feb. 1940	12,214	– 2,729	35	102,871	122,176	– 19,305	Inc. Deb.	91½	87½	82½	4⅛
	Nigerian	1,900	2.3.40	41,704	+ 1,221	49	1,898,191	1,985,184	– 86,993	—	—	—	—	—
	Rhodesia	2,442¾	Jan. 1940	384,405	—	17	1,520,480	—	—	—	—	—	—	—
	South Africa	13,289	6.4.40	676 256	+ 35,649	1	676,256	640,607	+ 35,649	—	—	—	—	—
	Victoria	4,774	Jan., 1940	989,333	+ 206,698	31	5,827,335	5,516,376	+ 310,959	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of 1/16
Argentine traffics are now given in pesos † Receipts are calculated @ 1s. 6d. to the rupee. § ex dividend

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